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December 11, 2002

Ms. Linda Martin, ES318 Southern Division, Naval Facilities Engineering Command P.O. Box 190010 North Charleston, SC 29406-9010

RE: Contract No. N62467-98-D-0995

Contract Task Order 0011

Naval Air Station (NAS) Whiting Field - Milton, Florida

Project Completion Report for the Interim Removal Actions at Sites 6, 16 and 38

Dear Ms. Martin:

CH2M HILL Constructors, Inc. (CCI) is pleased to provide the enclosed Project Completion Report for the Interim Removal Actions at Sites 6, 16 and 38 (Revision 01) at Naval Air Station (NAS) Whiting Field in Milton, Florida. Enclosed is one Compact Disk (CD) and one hard copy of the text only.

If you have any questions or comments regarding the enclosed, please do not hesitate to contact me at (850) 939-8300, ext. 17 or <a href="mailto:atwitty@ch2m.com">atwitty@ch2m.com</a>.

Sincerely,

CH2M HILL

Amy Twitty, P.G. Project Manager

cc: Mark Shull/NTR NAS Pensacola (CD only)

Craig Benedikt/EPA (1 hard copy text and 1 CD)

Jim Cason/FDEP (1 hard copy text and 1 CD)

Terry Hansen/TtNUS (CD only)

Larry Smith/TtNUS (CD only)

Jim Holland/NASWF (1 hard copy text, 1 full copy for library and 1 CD) Phillip Ottinger/TtNUS (1 hard copy text, 1 full copy for AR and 1 CD)

CCI Project File No. 151168

# Project Completion Report Interim Removal Actions at Sites 6, 16, and 38 Naval Air Station Whiting Field Milton, Florida

**Revision 01** 

**USEPA ID #FL217002344** 

# Contract No. N62467-98-D-0995 Contract Task Order 0011

Submitted to:

# U.S. Naval Facilities Engineering Command Southern Division

Prepared by:



115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346

December 2002

Project Completion Report Interim Removal Actions at Sites 6, 16, and 38 Naval Air Station Whiting Field Milton, Florida

Revision 01

USEPA ID #FL217002344

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Submitted to:

U.S. Naval Facilities
Engineering Command
Southern Division

Prepared by:



115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346

December 2002

Prepared/Approved By:	
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Army Twitty, Project Manager	Dacember 10, 2002 Date
Approved By:	December 10, 2002
Scott Smith, Deputy Program Manager	Date
Client Acceptance:	12-11-02 Date
U.S. Navy Responsible Authority	Date

This Project Completion Report for Interim Removal Actions at Sites 6, 16, and 38, Naval Air Station Whiting Field, Milton, Florida, was prepared under the direction of a Florida registered professional engineer.

Christopher C. Hood, P.E., No. 53927

Date



# CERTIFICATION OF TECHNICAL DATA CONFORMITY (DECEMBER 2002)

The contractor, CH2M HILL Constructors, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-98-D-0995, Contract Task Order (CTO) No. 0011, is complete and accurate and complies with all requirements of this contract.

DATE: December 2, 2002	_
NAME AND TITLE OF CERTIFYING OFFICIAL:	Mustraly
	Amy Twitty, P.G. Project Manager



## **Certificate of Completion**

CH2M HILL Constructors, Inc., attests, to the best of its knowledge and belief, the interim remedial action at Sites 6, 16, and 38, delivered under Contract No. N62467-98-D-0995, Naval Air Station Whiting Field, Milton, Florida, Contract Task Order (CTO) No. 0011, has been completed, inspected, and tested, and is in compliance with the contract.

Project QC Manager

Dato

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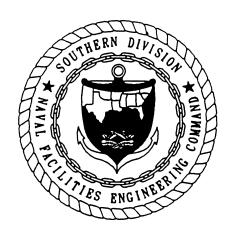
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#### **FOREWARD**

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment in ways unacceptable by today's standards. With growing knowledge of the long-term effects of hazardous materials on the environment, the Department of Defense (DOD) initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at their facilities.

One of these programs is the Installation Restoration (IR) Program. This program complies with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA), the Resource Conservation and Recovery Act (RCRA), and the Hazardous and Solid Waste Amendments of 1984. These acts establish the means to assess and clean up the hazardous waste site for both private-sector and Federal facilities. The CERCLA and SARA act form the basis for what is commonly known as the Superfund program.

Originally, the Navy's part of this program was called the Naval Assessment and Control of Installation Pollutants (NACIP) program. Early reports reflect the NACIP process and terminology. The Navy eventually adopted the program structure and terminology of the standard IR program.

The IR program is conducted in several stages, as follows:

- Preliminary Assessment (PA)
- Site Investigation (SI) (formerly the PA and SI steps were called the initial assessment study under the NACIP program)
- Remedial Investigation (RI) and Feasibility Study
- Remedial design and remedial action

The Southern Division, Naval Facilities Engineering Command manages and the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection (formerly Florida Department of Environmental Regulation) oversee the Navy environmental program at NAS Whiting Field. All aspects of the program are conducted in compliance with state and Federal Regulations, as ensured by the participation of these regulatory agencies.

Questions regarding the CERCLA program at NAS Whiting Field should be addressed to Ms. Linda Martin, Code ES318, at (843) 820-5574.

# **Executive Summary**

As outlined in the project scope, CCI conducted the following activities at the Naval Air Station (NAS) Whiting Field Sites 6, 16, and 38 in May 2002:

- Mobilization and setup
- Site utility clearance
- Excavation of soil at Sites 6, 16, and 38
- Soil sampling at Site 16
- Removal, transportation, and offsite disposal of excavated soil
- Collection and temporary onsite storage of decontamination liquids for disposal
- Placement and compaction of clean backfill soil in excavation areas
- Site restoration
- Decontamination and demobilization

The March 2001 Feasibility Study indicated that the contaminants of concern (COCs) for the surface soil at Site 6 were benzo(a)pyrene (Phase IIA sample 6SB03) and total recoverable petroleum hydrocarbons (TRPH) (Phase IIA sample 6SB04). In August 2001, 8 native surface soil samples and 15 subsurface samples were taken in the vicinity of Phase IIA samples 6SB03 and 6SB04 for the source delineation of benzo(a) pyrene and TRPH. It was determined that benzo(a)pyrene exceeded the U.S. Environmental Protection Agency (USEPA) Region IX preliminary remediation goal (PRG) of 290 micrograms per kilogram (µg/kg), and TRPH exceeded the Florida Department of Environmental Protection's (FDEP's) soil cleanup target level (SCTL) of 340 milligrams per kilogram (mg/kg). Based on the exceedances found during the Remedial Investigation (RI) activities and the delineation established by the August 2001 investigation, it was decided to remove the soil at the former Phase IIA sample locations 6SB03 and 6SB04.

Two areas were excavated at Site 6; each measured 10 feet by 10 feet and approximately 5 feet deep. Approximately 37 cubic yards (52.17 tons) of nonhazardous soil were removed from the combined areas. As the soil was being excavated, it was loaded into transport vehicles and transported to the approved disposal facility, Springhill Landfill in Cambellton, Florida. The excavated areas at Site 6 were immediately (same day) backfilled to the same elevation as the surrounding surface. The areas were then covered with centipede sod and fertilized.

At Site 16 RI Phase IIB surface soil sample location 16SO0601, 4 of the 11 additional surface soil samples analyzed for polycyclic aromatic hydrocarbons (PAHs) exhibited benzo(a)pyrene concentrations above the associated USEPA Region IX residential PRG of 62  $\mu$ g/kg. Three of the 4 samples exceeded the USEPA Region IX industrial PRG of 290  $\mu$ g/kg. One of these 4 sample results also exceeded the FDEP industrial SCTL of 500  $\mu$ g/kg. Based on the results of the RI Phase IIB and additional soil investigation in August 2001, the decision was made to remove the soil around former sample location 16SO0601.

The excavated area at Site 16 measured 45 feet by 20 feet and approximately 2 feet deep. The area was determined to contain PAH contaminants above the industrial criteria. Approximately 67 cubic yards (95.37 tons) of nonhazardous soil were removed. The soil was stockpiled until the excavation was complete, then transferred to transport vehicles and transported to

Springhill Landfill in Cambellton, Florida. Prior to completing the backfill, two subsurface soil samples were collected at the bottom of the excavation area and analyzed for PAHs. The results revealed the soil was above the leachability criteria for subsurface soil and that benzo(a)pyrene concentrations in one of the excavation samples slightly exceeded residential, direct exposure. After backfilling was complete at Site 16, fertilizer was applied to the surface soil, at the same elevation as the surrounding surface. No sod was placed on the surface soil at Site 16 because of its remote, wooded location.

A Preliminary Assessment/Site Investigation (PA/SI) of Site 38 was conducted in May 2000. Sample 38SS11/38SS11D exhibited pesticide concentrations of 4,4'-dichlorodiphenyl-dichloroethylene (DDE) and 4,4'-dichlorodiphenyltrichloroethane (DDT) above the USEPA Region IV recommended ecological screening values (ESVs), and alpha-chlordane, gamma-chlordane, and heptachlor epoxide above the USEPA Region IX PRGs of 1,600  $\mu g/kg$ , 1,600  $\mu g/kg$ , and 53  $\mu g/kg$ , respectively, for residential direct exposure. TRPH concentrations in sample 38SS11D also exceeded the FDEP leachability and direct exposure residential standard of 340 mg/kg. Moreover, sample 38SS38 indicated that dieldrin exceeded the USEPA Region IV ESV threshold of 0.5  $\mu g/kg$ . It was recommended the soils surrounding former sample 38SS11 and 38SS12 locations be excavated based on the PA/SI and additional delineation completed in August and September 2001.

One excavated area at Site 38 measured 10 feet by 10 feet and approximately 2 feet deep. The second area at Site 38 was irregularly shaped and measured 10 feet on two sides and 7.5 feet on the two other sides. Approximately 13 cubic yards of nonhazardous soil were removed from the combined areas. As the soil was being excavated, it was loaded into transport vehicles and transported to the approved disposal facility, Springhill Landfill in Cambellton, Florida. The excavated areas at Site 38 were immediately (same day) backfilled to the same elevation as the surrounding surface. The areas were then covered with centipede sod and fertilized.

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# **Acronyms and Abbreviations**

AVGAS aviation gasoline bls below land surface

CCI CH2M HILL Constructors, Inc.

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

COC contaminant of concern
CTO Contract Task Order

4,4'-DDD 4,4'-dichlorodiphenyldichloroethylene 4,4'-DDT 4,4'-dichlorodiphenyltrichloroethane

DOD Department of Defense

DQE data quality evaluation

ESV ecological screening value

FAC Florida Administrative Code

FDEP Florida Department of Environmental Protection

FL-PRO Florida Residual Petroleum Organic

HLA Harding Lawson Associate
IR Installation Restoration
μg/kg micrograms per kilogram
mg/kg milligrams per kilogram

MS/MSD matrix spike/matrix spike duplicate

NACIP Naval Assessment and Control of Installation Pollutants

NAS Naval Air Station

NAVFAC Naval Facilities Engineering Command
PA/SI Preliminary Assessment/Site Investigation

PAH polycyclic aromatic hydrocarbon

PCB polychlorinated biphenyl
PRG preliminary remediation goal
QA/QC quality assurance/quality control

RBC risk-based concentration

RCRA Resource Conservation and Recovery Act

RI Remedial Investigation

SARA Superfund Amendments and Reauthorization Act

SCTL soil cleanup target level

SVOC semivolatile organic compound
T&D transportation and disposal

TAL target analyte list
TCL target compound list

TCLP toxicity characteristic leaching procedure
TRPH total recoverable petroleum hydrocarbons

TtNUS Tetra Tech NUS, Inc.

USEPA U.S. Environmental Protection Agency

VOC volatile organic compound

## 1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) was contracted by the Department of the Navy, Southern Division, Naval Facilities Engineering Command (NAVFAC), to prepare this Project Completion Report for work performed by CCI at Naval Air Station (NAS) Whiting Field in Milton, Florida. This work was performed under Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) 0011, and in accordance with the management approach outlined in the Contract Management Plan (CCI, 1998), Basewide Work Plan (CCI, November 1999), Work Plan Addendum No. 3 (CCI, 2001a), Data Transfer Memorandum, Additional Soil Sampling at Site 6, Revision 01, (CCI, 2001b), Data Transfer Memorandum, Additional Soil Sampling at Site 16, Revision 01, (CCI, 2001c), and the Data Transfer Memorandum, Additional Soil Sampling at Site 38, Revision 00 (CCI, 2001d).

The objective of this project completion report is to document the activities associated with the completion of the interim removal actions performed by CCI under CTO 0011 at NAS Whiting Field, Milton, Florida, at Sites 6, 16, and 38. The remedial activities were conducted to remove surface soil exceeding target cleanup goals.

## 1.1 Project Scope

The scope of work for the project includes the following tasks:

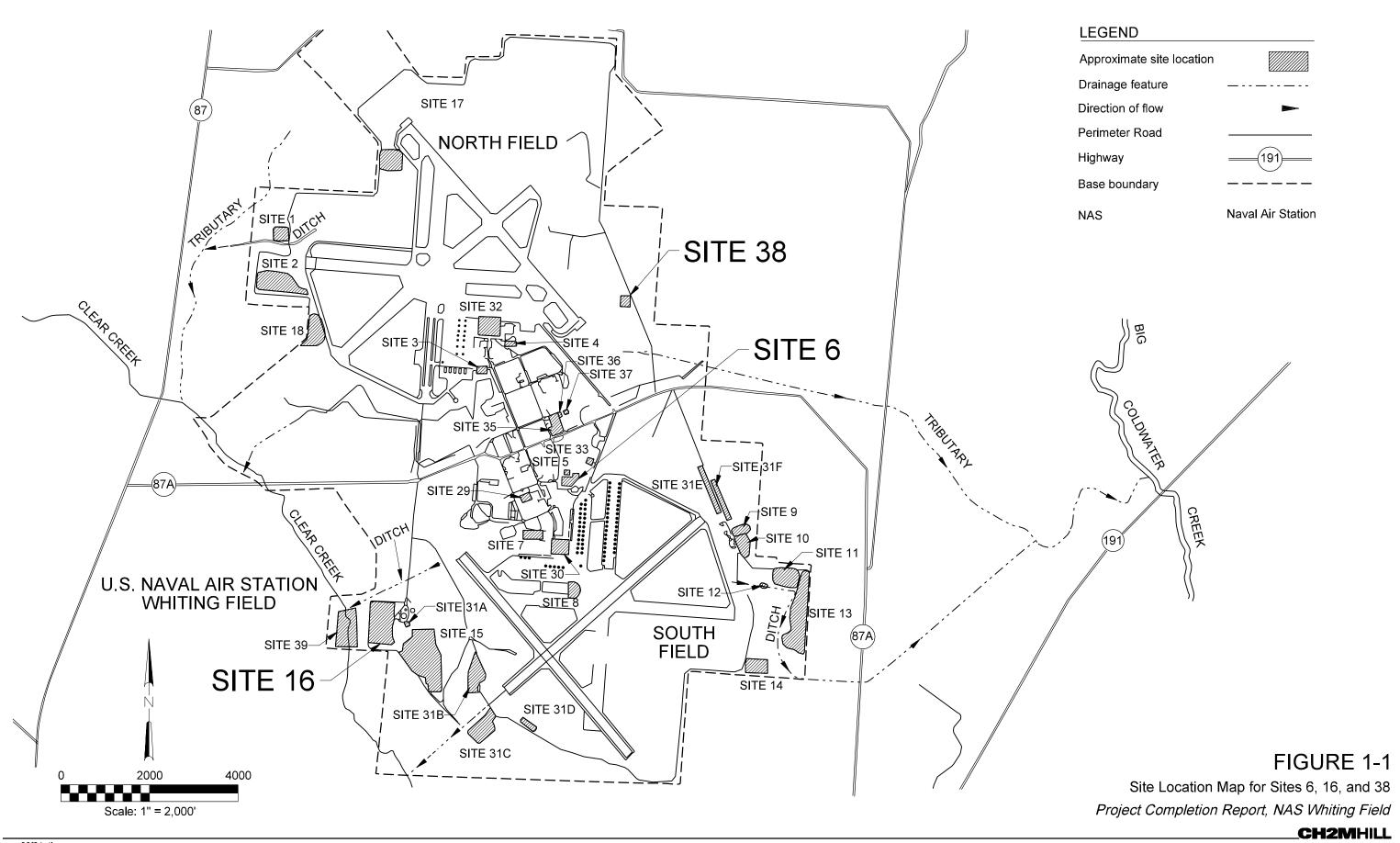
- Mobilization and setup
- Site utility clearance
- Excavation of soil at Sites 6, 16, 38 above the associated cleanup criteria
- Soil sampling at Site 16
- Removal, transportation, and offsite disposal of excavated soil
- Collection and temporary onsite storage of decontamination liquids for disposal
- Placement and compaction of clean backfill soil in excavation areas
- Site restoration
- Decontamination and demobilization

## 1.2 Site Location and Environmental History

The location and environmental history of Sites 6, 16, and 38 are described below.

#### 1.2.1 Site 6

Site 6 is located in the central portion of NAS Whiting Field in the Midfield area, southeast of the Midfield Maintenance Hangar, Building 1454 (Figure 1-1). Transformers were reportedly drained into the grass ditch east of Building 1454 from the 1940s until 1964.



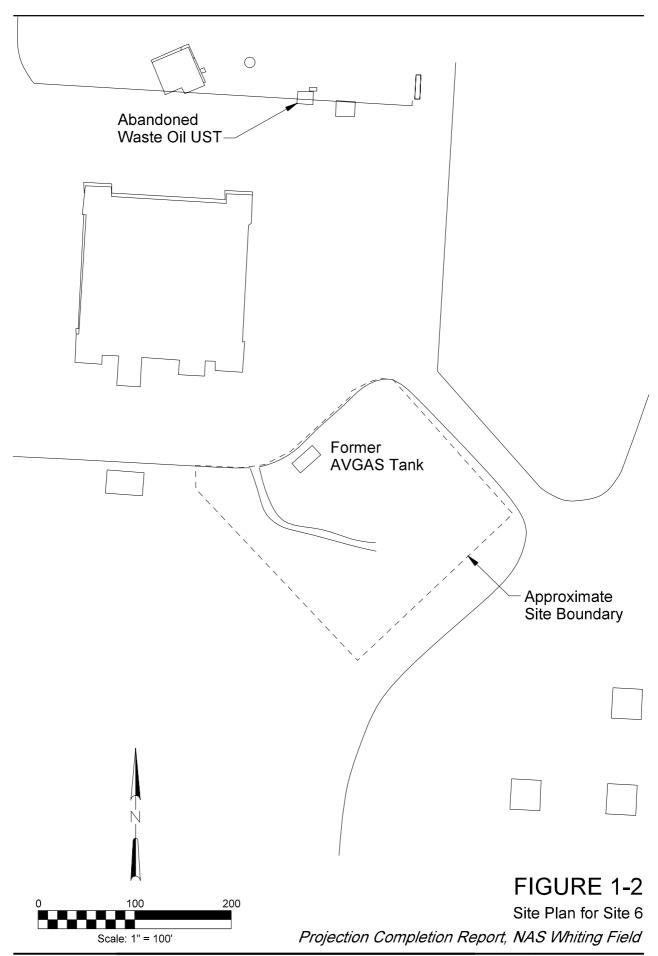
Polychlorinated biphenyls (PCBs) may have been present in the dielectric fluid drained from the transformers. Runoff from the grassed ditch drains in a northeasterly direction and eventually into Big Coldwater Creek, which is located approximately 2.3 miles east of the disposal site. A former aviation gasoline (AVGAS) storage tank area is adjacent to Site 6 to the northwest (Tetra Tech NUS, Inc. [TtNUS], 2001). Refer to Figure 1-2 for the site plan.

A verification study was performed in 1986 by Geraghty & Miller to provide an assessment of the physical and chemical conditions of the site. This was followed by a Phase I Remedial Investigation (RI) in 1990, which found low levels of PCBs in surface soils. Phase IIA fieldwork and analysis was conducted in 1992 by ABB Environmental Services. The exceedances for the subsurface soil included benzo(a)pyrene and vanadium. In the surface soil, 14 analytes exceeded site-specific background concentrations and either U.S. Environmental Protection Agency (USEPA) Region III Risk-based Concentrations (RBCs) or Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs) for direct soil exposure (residential). Arochlor 1260 exceeded the residential cleanup criteria but was below the industrial criteria. Based on the March 2001 Feasibility Study (TtNUS, 2001), the contaminants of concern (COCs) for the surface soil at Site 6 are benzo(a)pyrene (Phase IIA sample 6SB03) and total recoverable petroleum hydrocarbons (TRPHs) (Phase IIA sample 6SB04). TRPH concentrations in the surface soil at 6SB04 were above FDEP industrial criteria; however, the TRPH concentration in the 5- to 7-foot deep subsurface soil sample at sample 6SB04 was below cleanup criteria. Vanadium also exceeded the current FDEP residential SCTLs. In anticipation of the future revision of Chapter 62-777 Florida Administrative Code (FAC), which is proposed to increase the vanadium cleanup criteria (2003), only benzo(a)pyrene and TRPH were addressed in the 2001-2002 investigation.

On August 9, 2001, CCI collected 8 native surface soil samples, 15 subsurface samples, and associated quality assurance/quality control (QA/QC) samples in the vicinity of Phase IIA samples 6SB03 and 6SB04 for the source delineation of benzo(a)pyrene and TRPH, respectively. Figures 1-3 and 1-4 detail the location and results of the delineation samples taken from former sample locations 6SB03 and 6SB04, respectively.

Over the course of investigations at this site, USEPA Region IV changed its criteria for hazardous waste-related site evaluations from USEPA Region III RBCs to USEPA Region IX preliminary remediation goals (PRGs). Therefore, the analytical results were compared to the USEPA Region IX PRGs and the FDEP SCTLs.

Based on the exceedances found during the RI activities and the delineation established by the August 2001 investigation, an area measuring 10 by 10 feet and approximately 5 feet deep was recommended to be excavated in each of the former Phase IIA sample locations 6SB03 and 6SB04. The combined soil volume from the two areas proposed for excavation was approximately 37 cubic yards. A complete summary of the soil delineation is presented in CCI's Data Transfer Memorandum, Results of Additional Soil Sampling at Site 6 (CCI, 2001b).



#### **LEGEND**

Phase IIA surface soil sample and designation

Additional grid surface soil sample and designation

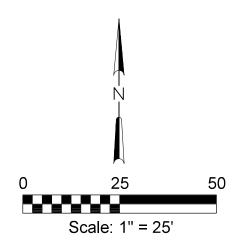
6SB03

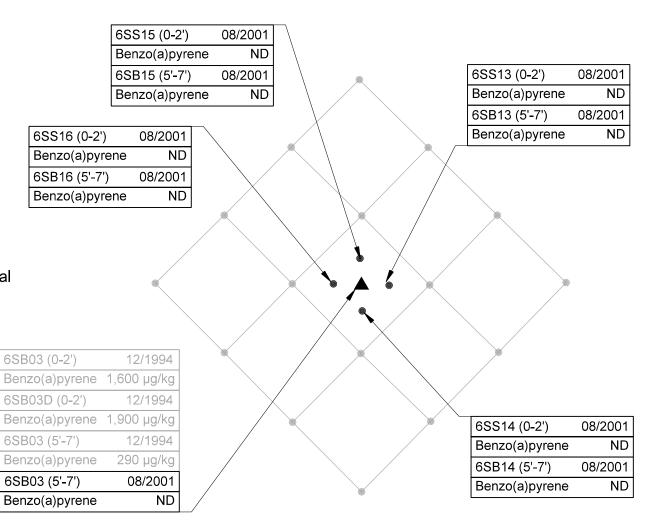
6SB03

6SB03

#### Notes:

- EPA Region IX Residential and Industrial Soil Preliminary Remedial Goals (PRGs) for benzo(a)pyrene are 62 μg/kg and 290 μg/kg, respectively.
- FDEP Direct Exposure Residential and Industrial Soil Cleanup Target Levels (SCTLs) for benzo(a)pyrene are 100 μg/kg and 500 μg/kg, respectively.
- 3. ND = Non-detect





#### FIGURE 1-3

Surface Soil Sample Exceedances Grid for 6SB03 at Site 6

#### **LEGEND**

Phase IIA surface soil sample and designation

6SB04 ▲

Additional grid surface soil sample and designation

6SS36

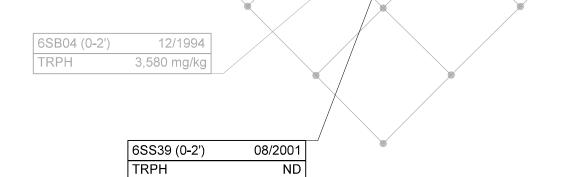
6SS
TRP

6SS36 (0-2')

TRPH ND 6SS37 (0-2') 08/2001 TRPH ND

#### Notes

- 1. TRPH = Total Recoverable Petroleum Hydrocarbons
- 2. There are no EPA Region IX Residential and Industrial Soil Preliminary Remedial Goals (PRGs) for TRPH.
- 3. FDEP Direct Exposure Residential and Industrial Soil Cleanup Target Levels (SCTLs) for TRPH are 340 mg/kg and 2,500 mg/kg, respectively.
- 4. ND = Non-detect



08/2001

ND

0 25 50
Scale: 1" = 25'

FIGURE 1-4

Surface Soil Sample Exceedances Grid for 6SB04 at Site 6

#### 1.2.2 Site 16

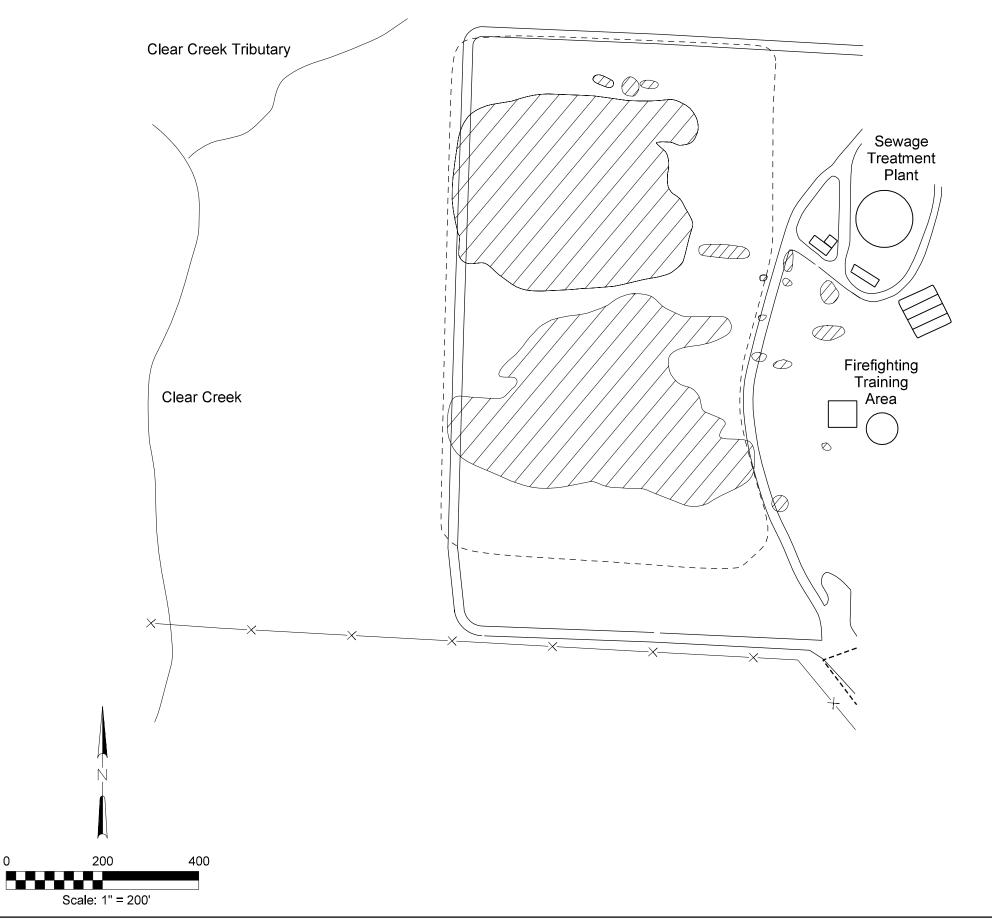
Site 16 is located in the southwest area of NAS Whiting Field, directly west of the South Airfield (Figure 1-1). The site is rectangular in shape, currently forested with planted pine trees, and covers approximately 12 acres. Figure 1-5 presents the site layout. The site was used as the primary waste disposal area for NAS Whiting Field from 1943 to 1965. The two large pits located on this site were used as repositories for general refuse. In addition, waste from aircraft operations and maintenance was disposed at an estimated annual volume of 3,000 and 4,000 tons. To reduce the volume, diesel fuel was used to ignite the waste, which included paints, solvents, waste oil, hydraulic fluid, and wastewater from paint stripping and other operations. Dielectric fluids containing PCBs may also have been disposed of at this site. A small, shallow ephemeral wetland (less than 0.1 acre and less than 2 feet deep) is located along the site's eastern boundary. The land surface slopes to the west at an average grade of 5 percent (Harding Lawson Associate [HLA], 2000).

A surface soil assessment was conducted during the RI of Site 16. During Phase IIA, three surface soil samples (16-SL-01 through 16-SL-03) were collected, and during Phase IIB, 17 surface soil samples (16SO0101 through 16SO1701) were collected. Surface soil samples were collected from 0 to 12 inches below land surface (bls).

Five subsurface soil samples were collected during the excavation of 10 test pits at Site 16 during Phase IIA investigations. These samples were collected from depths ranging from 2 to 10.5 feet bls. The samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, PCBs, metals, and cyanide. Eight analytes (calcium, chromium, iron, manganese, potassium, vanadium, zinc, and cyanide) were detected at concentrations exceeding the background screening values. However, no samples exceeded industrial standards for either the FDEP SCTLs or the USEPA Region III RBCs. Arsenic was detected in all five subsurface soil samples; three of the five samples and the duplicate sample exceeded the industrial FDEP SCTL and USEPA Region III RBC for arsenic. Based on recent FDEP guidance, analysis of soil at NAS Whiting Field Outlying Landing Fields, and the absence of site-related factors, arsenic levels at Site 16 are comparable to naturally occurring concentrations and do not require further consideration (FDEP, 2001).

Lead was also detected in all five subsurface soil samples and exceeded the USEPA Region III residential RBC in two of the samples, but was below the associated industrial criteria. Pesticides were detected at concentrations below the residential FDEP SCTLs and USEPA Region III industrial RBCs. No PCBs were detected in the subsurface soil samples (HLA, 2001).

All surface soil samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and target analyte list (TAL) inorganics. Of the three Phase IIA surface soil samples, only one analyte in one sample location exceeded criteria. Dieldrin was detected above leachability standards, but below residential and industrial criteria. Phase IIB surface soil samples exhibited concentrations of various polynuclear aromatic hydrocarbons (PAHs) and other



LEGEND

Interpreted landfill areas

Approximate site boundary

-----

Base boundary / fence

FIGURE 1-5

Site Plan for Site 16

inorganics above USEPA Region III RBCs and/or FDEP residential SCTLs. Exceedances included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, antimony, arsenic, barium, copper, iron, lead, and vanadium. One pesticide, dieldrin, was above the residential and leachability standards but below the industrial cleanup value. Of the analytes detected, only two PAHs, benzo(a)pyrene and dibenz(a,h)anthracene, were found at concentrations above industrial standards. These exceedances were detected at former Phase IIB sample location 16SO0601 (HLA, 2000). Therefore, one area at Site 16 in the vicinity of sample 16SO0601 required further investigation/delineation.

On August 7, 2001, CCI collected an additional 22 native surface soil samples and associated QA/QC samples in the vicinity of Phase IIB sample location 16SO0601 for the source delineation of PAH constituents. Over the course of investigations at this site, USEPA Region IV has switched the criteria used for hazardous waste-related site evaluations from USEPA Region III RBCs to USEPA Region IX PRGs. Therefore, analytical results were compared to the USEPA Region IX PRGs and the FDEP SCTLs. Figure 1-6 details the location and results of the delineation samples taken from former sample location 16SO0601.

Based on the results of the RI and the additional soil investigation conducted in August 2001, PAH contamination above industrial criteria extends over an area measuring 45 by 20 feet and approximately 2 feet deep around former Phase IIB sample location 16SO0601. It was recommended that approximately 67 cubic yards of soil be excavated as part of the interim removal action at Site 16. Details are provided in CCI's Data Transfer Memorandum, Results of Additional Soil Sampling at Site 16 (CCI, 2001c).

#### 1.2.3 Site 38

Site 38 is located in the northern portion of NAS Whiting Field, immediately west of the 7<sup>th</sup> hole fairway on the NAS Whiting Field Golf Course. Refer to Figure 1-1 for the site location.

The site includes the area of former Building 2877, which was located approximately 276 feet west of the patrol road and 860 feet north of the white lattice fence associated with the pistol firing range. Figure 1-7 presents the site plan. Building 2877 was formerly the golf course maintenance building and was used as a storage facility for pesticides and for battery reconditioning. A 1-acre area north of the building was used to rinse trucks after they were used to spray pesticides. The pesticides stored in Building 2877 included organophosphates, herbicides, fungicides, chlordane, heptachlor epoxide, and some hydrocarbon pesticides. Pesticide storage was discontinued in 1983 after the completion of a new pesticide facility.

Battery acid from golf cart batteries was reportedly drained into a sink inside Building 2877, which in turn drained into a tank consisting of an underground concrete culvert open at one end. The tank retained approximately 50 gallons of liquid before draining to the subsurface. The tank was filled with rock sometime between 1974 and 1979, and battery acid draining was discontinued. Building 2877 was demolished in 1993 during an upgrading and reconstruction project at the NAS Whiting Field Golf Course. The concrete building foundation is believed to still be present; however, it is not known if the former drainage tank is still present (TtNUS, 2000).

#### **LEGEND**

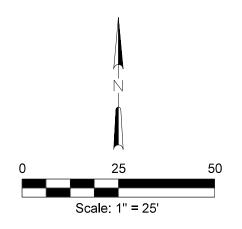
Phase IIB surface soil 16SO0601 sample and designation △

Additional grid surface soil sample and designation

16SO3401

#### Notes:

- EPA Region IX Residential and Industrial Soil Preliminary Remedial Goals (PRGs) for benzo(a)pyrene and dibenz(a,h)anthracene are 62 μg/kg and 290 μg/kg, respectively.
- FDEP Direct Exposure Residential and Industrial Soil Cleanup Target Levels (SCTLs) for benzo(a)pyrene and dibenz(a,h)anthracene are 100 μg/kg and 500 μg/kg respectively.
- NE = No exceedance of applicable criteria
   ND = Non-detect



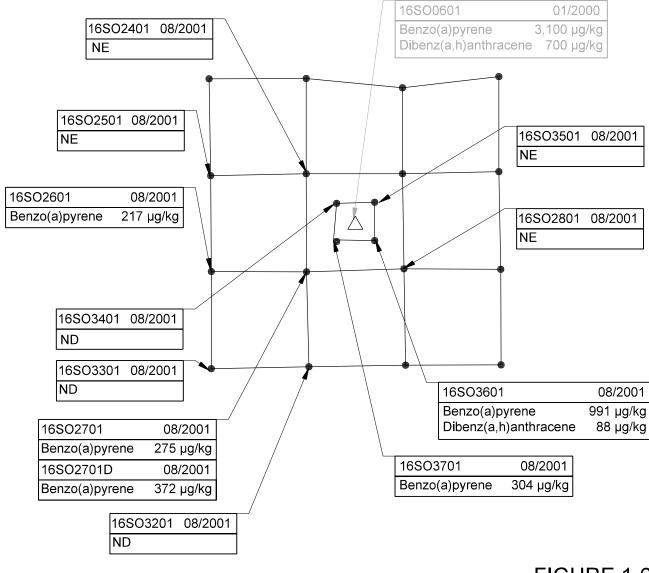
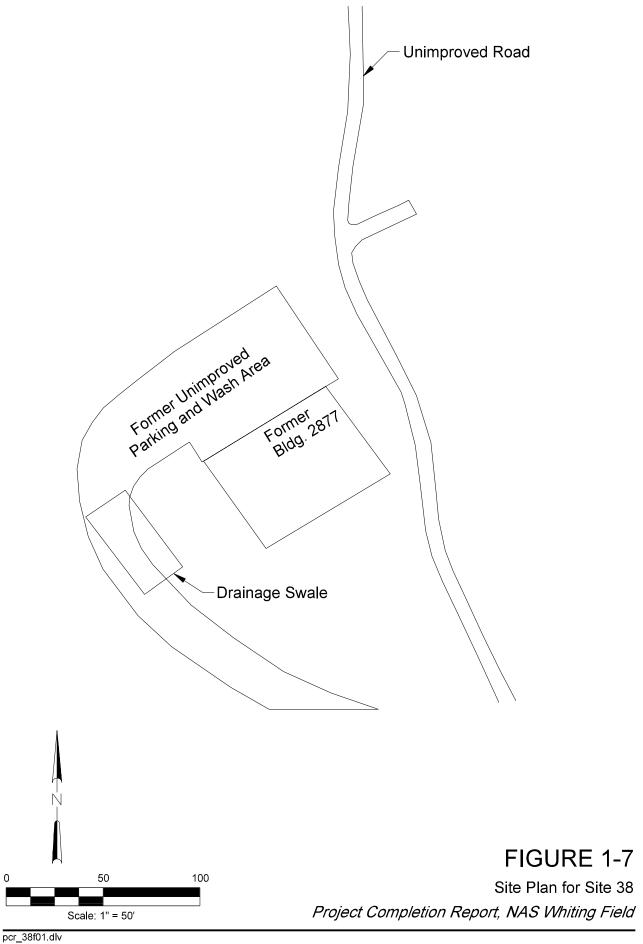


FIGURE 1-6

Surface Soil Sample Exceedances Grid for 16SO0601 at Site 16



In March 1996, during the Navy's relative risk ranking for the site, Brown & Root Environmental Services, Inc., collected a single surface soil sample (0- to 1-foot sample depth) at Site 38. The soil sample was analyzed for the target compound list (TCL) VOCs, SVOCs, pesticides, PCBs, and TAL inorganic compounds. No organic compounds were detected above analytical method detection limits.

In May 2000, TtNUS collected 19 surface soil samples (38SS01 through 38SS19) and 10 subsurface soil samples (38SB10 through 38SB19) during the Preliminary Assessment/ Site Investigation (PA/SI) of Site 38 (TtNUS, 2002). Surface soil samples were collected from 0 to 1 feet bls. All subsurface soil samples were collected at a depth interval of 9 to 11 feet bls, except for the 38SB13 sample, which was collected at a depth of 8 to 10 feet bls. The subsurface soil samples exhibited concentrations of various metals. Except for vanadium, all concentrations were below the associated USEPA Region IX PRGs and FDEP residential and industrial SCTLs from Chapter 62-777, FAC. At sample locations 38SB10 (9 to 11 feet bls) and 38SB13 (8 to 10 feet bls), vanadium levels were above the FDEP residential direct exposure criteria but below industrial direct exposure levels.

The surface soil samples exhibited concentrations of various pesticides, metals, and TRPH. USEPA Region IV Risk Assessment Guidance Recommended Ecological Screening Values (ESVs) were exceeded in six locations. However, two samples, 38SS11 and 38SS12, exceeded FDEP SCTLs for residential direct exposure, FDEP leachability standards, or USEPA Region IX residential PRGs.

Surface soil sample 38SS11/38SS11D exhibited pesticide concentrations of 4,4'-dichlorodiphenyldichloroethylene (DDE) and 4,4'-dichlorodiphenyltrichloroethane (DDT) above the USEPA Region IV recommended ESVs, and alpha-chlordane, gamma-chlordane, and heptachlor epoxide above the FDEP SCTLs and USEPA Region IX PRGs for residential direct exposure. TRPH concentrations in sample 38SS11D also exceeded FDEP leachability and direct exposure residential standards.

Surface soil sample 38SS12 exhibited concentrations of 4,4'-DDE, 4,4'-DDT, and dieldrin above USEPA Region IV ESVs and concentrations of dieldrin and heptachlor epoxide above the Region IX PRG residential standard. Surface soil samples 38SS13, 38SS14, 38SS15, and 38SS16 were collected following the 38SS11/38SS11D and 38SS12 sampling event. These sample results did not exceed regulatory guidelines.

According to TtNUS, risk assessments have been performed and it has been determined that ESV exceedances do not pose an ecological risk. Therefore, sample locations with only ESV exceedances were not investigated further. A summary of the risk assessment is provided in TtNUS's Assessment Report for Sites 5A, 07, 29, 35, 38 and PSC1485C (TtNUS, 2002).

On August 10, 2001, CCI personnel collected surface soil samples at Site 38 to delineate the extent of the COCs, which include pesticide and TRPH constituents in surface soil in the vicinity of PA/SI samples 38SS11 and 38SS12. Seven surface soil samples and associated QA/QC samples were collected in the vicinities of PA/SI samples 38SS11 and 38SS12. Four samples were collected in the vicinity of sample 38SS11, and three samples were collected in the vicinity of sample 38SS12. Analytical results were compared to the USEPA Region IX PRGs and the FDEP SCTLs. Figures 1-8 and 1-9 detail the location and results of the delineation samples taken from former sample locations 38SS11 and 38SS12, respectively.

#### **LEGEND**

RI surface soil sample (0-1') and additional subsurface soil sample (2'-3') and designation (May 2000 and September 2001, respectively)

38SS11

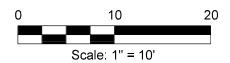
Additional grid surface soil sample (0-2') 38SS20 and designation (August 2001)

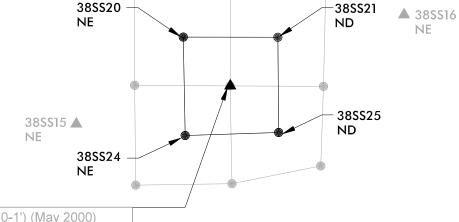
#### Notes

- 1. All units are mg/kg.
- 2. TRPH = Total Recoverable Petroleum Hydrocarbons
- 3. The applicable residential/industrial soil criteria for Site 38 are:

	EPA PRG	FDEP SCTL	EPA ESV
alpha-Chlordane	1.6/11	3.1/12	NA
gamma-Chlordane	1.6/11	3.1/12	NA
4,4'-DDE	1.7/12	3.3/13	0.0025
4,4'-DDT	1.7/12	3.3/13	0.0025
Heptachlor Epoxide	0.053/0.27	0.1/0.4	NA
TRPH	NA/NA	340/2500	NA

- 4. PRG = EPA Region IX Preliminary Remedial Goal
- 5. SCTL = Soil Cleanup Target Level
- 6. ESV = EPA Region IV Recommended Ecological Screening Value
- 7. NA = Not Available
- 8. NE = No exceedance of applicable criteria
- 9. ND = Non-detect
- 10. J = Estimated Value





38SS11 (0-1') (May 2000)			
alpha-Chlordane	5.72 J		
gamma-Chlordane	4.55		
4,4'-DDE	0.446 J		
4,4'-DDT	0.517 J		
38SS11D (0-1') (May	/ 2000)		
alpha-Chlordane	5.46 J		
gamma-Chlordane 4.26			
4,4'-DDE 0.402			
4,4'-DDT 0.468			
Heptachlor Epoxide 0.194			
TRPH 479			
38SO11 (2'-3') (September 2001)			
TRPH	ND		
alpha-Chlordane NE			
gamma-Chlordane NE			
Heptachlor Epoxide NE			
1 '			

FIGURE 1-8

Surface Soil Sample Exceedances Grid for 38SS11 at Site 38

#### LEGEND

RI surface soil sample (0-1') and additional subsurface soil sample (2'-3') and designation (May 2000 and September 2001, respectively)

38SS12

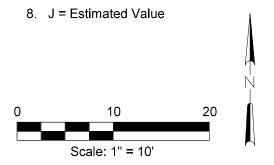
Additional grid surface soil sample (0-2') 38SS35 and designation (August 2001)

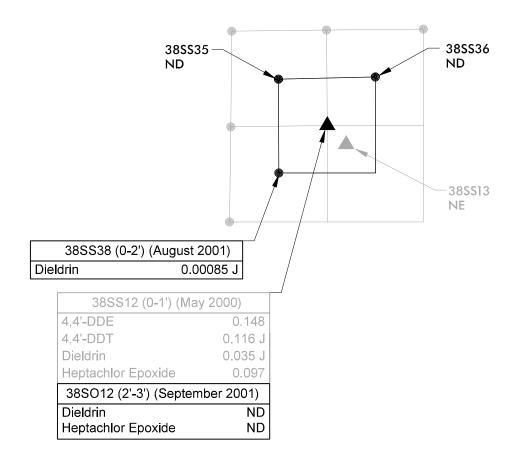
#### Notes

- 1. All units are mg/kg.
- 2. The applicable residential/industrial soil criteria for Site 38 are:

	EPA PRG	FDEP SCTL	EPA ESV
4,4'-DDE	1.7/12	3.3/13	0.0025
4,4'-DDT	1.7/12	3.3/13	0.0025
Dieldrin	0.03/0.15	0.07/0.3	0.0005
Heptachlor Epoxide	0.053/0.27	0.1/0.4	NA

- 3. PRG = EPA Region IX Prelimianry Remedial Goal
- 4. SCTL = Soil Cleanup Target Level
- 5. ESV = EPA Region IV Recommended Ecological Screening Value
- 6. NE = No exceedance of applicable criteria
- 7. ND = Non-detect





#### FIGURE 1-9

Surface Soil Sample Exceedances Grid for 38SS12 at Site 38

Figures of the grid layouts for Site 38 are included in Work Plan Addendum No. 3, Interim Removal Action Work Plan at Sites 6, 16, and 38.

Based on the results of the May 2000 PA/SI and the delineation completed in the August and September 2001 investigations, it was recommended that one area measuring approximately 10 by 10 feet and 2 feet deep, and one irregularly shaped area measuring 10 by 10 feet on two sides and 7.5 by 7.5 feet on two sides and 2 feet deep, be excavated from the immediate vicinity of samples 38SS11 and 38SS12. The total combined volume recommended for excavation from the two areas was approximately 13 cubic yards. Details are provided in CCI's Data Transfer Memorandum, Results of Additional Soil Sampling at Site 38 (CCI, 2001d).

## 1.3 Remedial Action Objective

The objective of the remedial activities was to perform excavation of soil exceeding residential cleanup goals for benzo(a)pyrene and TRPH at Site 6, industrial cleanup goals for PAHs at Site 16, and residential cleanup goals for pesticides and TRPH at Site 38. Table 1-1 presents the remedial goals for each site.

TABLE 1-1 Soil Remedial Goals

Site	Contaminant	Soil Remedial Goal
Site 6	Benzo(a)pyrene TRPH	290 μg/kg (USEPA Region IX PRG - industrial) 340 mg/kg (FDEP SCTL – residential/leachability)
Site 16	Benzo(a)pyrene Dibenz(a,h)anthracene	290 μg/kg (USEPA Region IX PRG - industrial) 290 μg/kg (USEPA Region IX PRG - industrial)
Site 38	Alpha Chlordane Dieldrin Gamma Chlordane Heptachlor Epoxide TRPH	1,600 μg/kg (USEPA Region IX PRG - residential) 30 μg/kg (USEPA Region IX PRG - residential) 1,600 μg/kg (USEPA Region IX PRG - residential) 53 μg/kg (USEPA Region IX PRG - residential) 340 mg/kg (FDEP SCTL – residential/leachability)

TRPH = total recoverable petroleum hydrocarbons µg/kg = micrograms per kilogram mg/kg = milligrams per kilogram USEPA = U.S. Environmental Protection Agency PRG = preliminary remediation goal FDEP = Florida Department of Environmental Protection

## 1.4 Regulatory Framework

SCTL = soil cleanup target level

The sampling and interim removal actions were performed under the guidelines set forth by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Excavation limits were selected by comparing the analytical results to Florida SCTLs specified in Chapter 62-777 FAC and USEPA Region IX PRGS.

# 2.0 Significant Events

# 2.1 Chronology of Events

The chronology of events for the remediation activities at Sites 6, 16, and 38 is included in Table 2-1. Specific details describing the remediation activities are included in Sections 3.0 and 4.0 of this report.

TABLE 2-1 Chronology of Events

Event	Start Date
Excavation Permit started	01-May-02
Mobilization	01-May-02
Cleared Site 16	08-May-02
Began excavation, transport, and disposal at Site 16	09-May-02
Soil Removal and load-out at Site 38	13-May-02
Completed Site 38 Restoration	14-May-02
Completed excavation at Site 16	14-May-02
Inspection Site 38 (Jim Holland)	14-May-02
Soil removal, transport, and disposal at Site 6	15-May-02
Began Site 6 Restoration	15-May-02
Began backfill of excavation area Site 16	16-May-02
Completed Sites 6 & 38 Restoration	17-May-02
Final cleanup, fertilization and grading of Site 16	17-May-02
Completed Site 16 Restoration	17-May-02
Inspection Sites 6 and 16 (Jim Holland)	23-May-02
Subcontractor Demobilization	23-May-02
Dispose of liquid wastes at NASWF Water Treatment Facility	01-July-02

# 2.2 Scope of Work Variances

One variance and/or differing site conditions in the scope of work was encountered. Preexcavation and post-excavation surveys were scheduled in the work plan. However, the areas excavated were the same as the areas surveyed prior to field work (as marked by survey stakes); therefore, the post-excavation survey was not performed.

# 2.3 Safety Implementation

During the 23-day duration of the excavation portion of the project, approximately 360 personnel hours were worked onsite by CCI and subcontractors with no first aid, property damage, or loss-time incidents.

# 3.0 Removal Action Activities

## 3.1 Removal Action Participants

The remedial action participants and their respective responsibilities for CTO No. 0011 activities are shown in Figure 3-1.

# 3.2 Summary of Removal Action Activities

This project consisted of three different site locations at NAS Whiting Field. Although they are three separate sites, the activities were similar and some tasks were carried out simultaneously. For the purposes of this report, the major activities at the sites are addressed concurrently. Excavation areas are shown in Figure 3-2 (Site 6), Figure 3-3 (Site 16), and Figure 3-4 (Site 38). Appendix A presents the survey report for the points surveyed prior to excavation.

Wastestream quantities and disposal facilities for the three sites are listed in Table 3-1. Appendix B includes the Testing Plan and Log for soil confirmation, characterization, and disposal sampling. Laboratory data are also included in the appendices and are referenced in the corresponding sections of this report.

**TABLE 3-1**Wastestream Quantities and Disposal Facilities

Site	Non-Haz Waste	Material	<b>Quantity Disposed</b>	Disposal Facility
6	Solids	Soil	37 cubic yds/ 52.17 tons	Springhill Landfill
16	Solids	Soil and Debris	67 cubic yds/ 95.37 tons	Springhill Landfill
38	Solids	Soil	15 cubic yds/ 18.21 tons	Springhill Landfill
6, 16, & 38	Decontamination liquid	Liquid	120 gallons	NAS Whiting Field Wastewater Treatment Plant

Note:

Several yards of soil from Site 16 were loaded into one of the transport vehicles from Site 6.

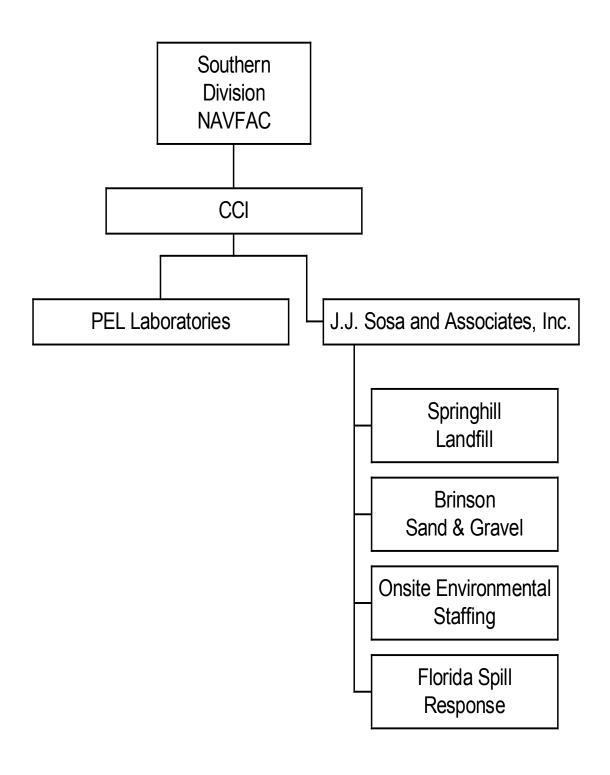
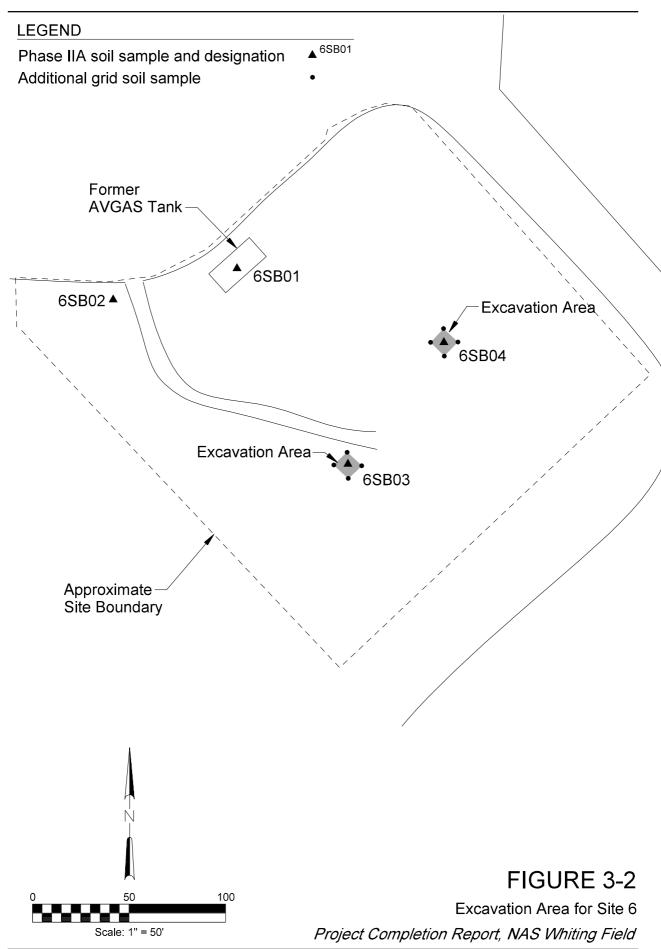


FIGURE 3-1
Organization of Remedial Action Participants







## 3.2.1 Soil Excavation

The intent of the excavations was to remove contaminated soil exceeding the associated soil cleanup criteria (Section 1.3) at each of the three sites. The excavated soil from Sites 6 and 38 was loaded directly into the transport vehicles as it was being excavated. Soil excavated from Site 16 was stockpiled onto poly sheeting and upon completion of excavation, transferred to the transport vehicles for transport and disposal. The soil was transported to the Springhill Landfill. Disposable poly sheeting was spread in the area where the transport vehicles were being loaded to prevent migration of contaminants. Once either the transport vehicle was full or the excavation was complete, the poly sheeting was folded and placed in the vehicle with the soil. Excavation activities are described in the following sections.

#### 3.2.1.1 Site 6

Based on the exceedances of benzo(a) pyrene and TRPH (both above industrial SCTLs) found during the RI activities and the delineation established by the most recent investigations of Site 6, an area measuring 10 by 10 feet and approximately 5 feet deep was excavated in each of the former Phase IIA sample locations 6SB03 and 6SB04. The combined soil volume from the two areas excavated was approximately 37 cubic yards (approximately 52.7 tons). The last transport vehicle for Site 6 was not completely full and was topped off with soil from Site 16. Because the extent of the excavation both vertically and horizontally was predetermined, no confirmation samples were collected from the sidewalls or bottom of the excavation at Site 6. Figure 3-2 presents the excavation areas.

#### 3.2.1.2 Site 16

Based on the results of the RI and the additional soil investigation of Site 16, PAH contamination above industrial criteria extended over an area measuring 45 by 20 feet and approximately 2 feet deep around former Phase IIB sample location 16SO0601. The total volume excavated was approximately 67 cubic yards (approximately 95.37 tons). To determine the soil concentrations left in the subsurface soil beneath the excavation, two samples were collected from 2 to 2.5 feet bls. Section 3.2.2 describes the sampling and analysis. Figure 3-3 presents the excavation of Site 16.

#### 3.2.1.3 Site 38

Based on the results of the May 2000 PA/SI, and the delineation completed during the August and September 2001 investigations of Site 38, two areas above residential criteria for pesticides and TRPH. Two areas were excavated from the immediate vicinity of sample locations 38SS11 and 38SS12–one area measuring approximately 10 by 10 feet and 2 feet deep; and one irregular area measuring approximately 10 by 10 feet on two sides and 7.5 by 7.5 feet on two sides and 2 feet deep. The total combined volume excavated from the two areas was approximately 15 cubic yards. Because the extent of the excavation both vertically and horizontally has been determined, no confirmation samples were collected from the sidewalls or bottom of the excavation at Site 38. Figure 3-4 presents the excavation areas of Site 38.

## 3.2.2 Sampling and Analysis

Excavation areas were pre-determined and described in the Interim Removal Action Work Plan at Sites 6, 16, and 38 (CCI, 2001a). Post-excavation sampling and analysis were not performed at Sites 6 and 38; however, two samples were collected at Site 16. Analytical data acquired in support of activities documented in this report included the following:

- Analysis of nearby barrow pit soil to determine if it was suitable for backfill
- Analysis of two subsurface soil samples at Site 16
- Waste characterization of soil for disposal (Appendix C)
- Analysis of decontamination liquid prior to disposal (Appendix C)

## 3.2.2.1 Backfill Material Analysis

A nearby barrow pit was sampled on March 4, 2002, and analyzed for a full suite of parameters to determine if it was suitable for backfill. Analyses included VOCs (USEPA SW 846 Method 8260B), SVOCs (USEPA SW 846 Method 8270C), TAL metals (USEPA SW 846 Methods 6010B and 7471), TRPH (Florida Residual Petroleum Organic [FL-PRO] methodology), PCBs (USEPA SW 846 Method 8082), and pesticides and herbicides (USEPA SW 846 Methods 8081A and 8151A). Backfill soil analytical results were compared to the SCTLs for direct exposure, residential listed in Chapter 62-777 FAC. Vanadium was detected at 16 mg/kg and slightly exceeded the residential SCTL of 15 mg/kg. Due to the impending increase of the soil criteria for vanadium by the State of Florida, the excavation was backfilled and leveled to grade. Analytical results of the backfill material are included in Appendix D. This backfill was used for all three sites.

## 3.2.2.2 Site 16 Post-Excavation Confirmation Sampling

Prior to completing the backfill at Site 16, two subsurface soil samples were collected at the bottom of the excavation area and analyzed for PAHs by SW 846 Method 8310 to determine the levels of contamination remaining in the subsurface soil. The results for the two subsurface samples are summarized in Table 3-2. No TAL compounds were detected above the leachability criteria for subsurface soil, but PAHs were detected in both samples. A copy of the laboratory report is included in Appendix E. The data were third-party validated by E-Data; the validation report is included in Appendix F.

**TABLE 3-2**Post Excavation Analytical Summary Results for Confirmational Samples at Site 16

Laboratory Analyses	011-16-CS-S-01 2-3 feet bls Soil	011-16-CS-S-02 2-3 feet bls Soil	62-777 FAC Leachability
Naphthalene	0.0067 U	0.0066 U	1.7
Acenaphthylene	0.0067 U	0.0066 U	27
1-Methyl naphthalene	0.0067 U	0.0066 U	2.2
2-Methyl naphthalene	0.0067 U	0.0066 U	6.1
Acenaphthene	0.0067 U	0.0066 U	2.1
Fluorene	0.0067 U	0.0066 U	160

**TABLE 3-2**Post Excavation Analytical Summary Results for Confirmational Samples at Site 16

Laboratory Analyses	011-16-CS-S-01 2-3 feet bls Soil	011-16-CS-S-02 2-3 feet bls Soil	62-777 FAC Leachability
Phenanthrene	0.0097	0.0066 U	250
Anthracene	0.0067 U	0.0004 J	2500
Fluoranthene	0.0404	0.112	1200
Pyrene	0.0184	0.0861	880
Benzo(a)anthracene	0.0179	0.0367	3.2
Chrysene	0.0162	0.043	77
Benzo(b)fluoranthene	0.0183	0.0617	10
Benzo(k)fluoranthene	0.0065 J	0.0273	25
Benzo(a)pyrene	0.137	0.169	8
Dibenz(a,h)anthracene	0.0067 U	0.0238	30
Benzo(g,h,i)perylene	0.0221	0.0637	32000
Indeno(1,2,3-cd)pyrene	0.0151	0.0703	28

U = undetected

All values reported in milligrams per kilogram (mg/kg).

## 3.2.2.3 Waste Characterization of Soil for Disposal

Samples were collected at Sites 6, 16, and 38 at depths of 0 to 5, 0 to 2 and 0 to 2 feet, respectively, on December 4, 2001, to develop a disposal profile.

Analyses included toxicity characteristic leaching procedure (TCLP) VOCs (USEPA SW 846 Methods 1311 and 8260B), TCLP SVOCs (USEPA SW 846 Methods 1311 and 8270C), TCLP pesticides (USEPA SW 846 Methods 1311 and 8081A), TCLP herbicides (USEPA SW 846 Methods 1311 and 8151A), TCLP metals (USEPA SW 846 Methods 1311, 6010B and 7471), TRPH (FL-PRO methodology), PCBs (USEPA SW 846 Method 8082), corrosivity (USEPA SW 846 Methods 9045C), reactivity (USEPA SW 846, Chapter 7.3), and ignitability (USEPA Method 1030). The laboratory report is included in Appendix C. Results indicated that the soil was nonhazardous. A disposal profile submitted and approved and the soil was transported to the Springhill Regional Landfill in Campbellton, Florida. The Transportation and Disposal Log and manifests, weigh tickets, and certificates of disposal are provided in Appendices I and J, respectively.

### 3.2.2.4 Waste Characterization of Decontamination Liquid

The decontamination-generated fluids were placed into 55-gallon drums and sampled after the field work was compete. Analyses included VOCs (SW 846 Method 8260B), SVOCs (USEPA SW 846 Method 8270C), pesticides (USEPA SW 846 Method 8081A), herbicides

J = estimated

bls = below land surface

(USEPA SW 846 Method 8151A), TAL metals (USEPA SW 846 Methods 6010B and 7470), TRPH (FL-PRO method), corrosivity (USEPA SW 846 Methods 9045C), reactivity (USEPA SW 846, Chapter 7.3), and ignitability (USEPA Method 1030). The laboratory report is included in Appendix C. Results indicated that the decontamination water is nonhazardous and was disposed at the NAS Whiting Field Wastewater Treatment Plant on July 1, 2002.

## 3.2.3 Data Quality Evaluation

Two soil samples were collected at Site 16, NAS Whiting Field, Milton, Florida, on May 10,2002. Field QC samples including equipment rinsate blanks and matrix spike/matrix spike duplicate (MS/MSD) pairs were submitted to PEL Laboratories, Tampa, Florida. The data were validated by E-Data, Inc., of Wauwatosa, Wisconsin. The full data quality evaluation (DQE) report is included in Appendix F.

### 3.2.4 Site Restoration

All three sites were restored pursuant to Work Plan Addendum No. 03, Interim Removal Action at Sites 6, 16, and 38, NAS Whiting Field, (CCI, 2001a). Clean soil was brought in from an offsite, on-base source. Analytical results for the backfill are presented in Appendix D. Loose soil was placed in each excavation and compacted with three passes using heavy equipment.

At Sites 6 and 38, the excavation was backfilled to the same elevation as the surrounding surface, covered with sod, and then fertilized. At Site 16, the excavation was backfilled to the same elevation as the surrounding surface and fertilized. No sod was placed at Site 16 because of its remote, wooded location.

# 4.0 Performance Standards and Construction Quality Control

The following QCs were implemented during the course of the project and are described in this section:

- Field observation
- Excavation control
- Excavation backfill
- Waste disposal
- Site restoration
- Equipment decontamination

## 4.1 Field Observation

CCI provided project oversight of all field operations throughout the project. CCI field oversight staff included a Site Superintendent/Site Health and Safety Specialist and a Project QC Manager. The QC records for this project are included in Appendix G. Detailed records of project activities were maintained in the site field records. Photographs of all site activities were collected throughout the project and are included in Appendix H.

## 4.2 Excavation Control

The objective of the limited excavations was to remove contaminated soil exceeding industrial standards. Excavation areas were demarcated by survey flags (at the previously determined horizontal excavation limits) and the perimeter marked by spray paint. The vertical depths of the excavations were measured by the CCI Site Superintendent using standard means. As the soil at Sites 6 and 38 was being excavated, it was loaded directly into the transport vehicles for disposal. The soil at Site 16 was stockpiled until excavation was complete. Soil quantities were calculated based on standard volume measurements (length by width by height) and verified by tonnage and a soil bulk density of 1.4 tons per cubic yard.

## 4.3 Excavation Backfill

A barrow source was located on base by NAS Whiting Field personnel. The barrow source was sampled prior to use. Analytical results of the backfill material are described in Section 3.2.2.1 and presented in Appendix D.

The excavated areas at Sites 6 and 38 were backfilled in 12-inch loose lifts immediately (on the same day) after excavation was complete. Site 16 was excavated over a period of 7 days and the bottom of the excavation was sampled prior to backfilling. After backfilling was complete, backfill material was compacted with three passes using heavy equipment.

## 4.4 Waste Disposal

## 4.4.1 Soil

All of the soil and debris excavated at NAS Whiting Field Sites 6, 16, and 38 were either transferred to transport vehicles or stockpiled until excavation complete, then transferred to transport vehicles. All soil was designated as nonhazardous, manifested, and shipped to the Waste Management lined, Subtitle D Springhill Regional Landfill facility in Campbellton, Florida. The Transportation and Disposal (T&D) Log and waste manifests, certified weigh tickets, and disposal certificates are included in Appendices I and J, respectively.

## 4.4.2 Liquid

The decontamination-generated fluids were placed into 55-gallon drums. NAS Whiting Field personnel received approval to dispose the liquid into the base sewer treatment system. The liquid was disposed on July 1, 2002.

## 4.5 Site Restoration

Once the backfilling operations were complete at Sites 6 and 38, the areas were graded for drainage consistent with the surrounding area and sodded with centipede grass. To provide adequate nutrient, fertilizer was applied to the newly installed centipede sod. The minor gaps between the sod flats were filled with sand. After backfilling was complete at Site 16, fertilizer was applied to the surface soil. No sod was placed on the surface soil at Site 16 because of its remote, wooded location.

## 4.6 Equipment Decontamination

All equipment used during the project that came into or potentially came into direct contact with contaminated soil contents was decontaminated in accordance with decontamination procedures as specified in the Work Plan Addendum (CCI, 2000). Decontamination was accomplished using either dry methods or a pressure washer, with the appropriate method being determined by the extent of contamination. All decontamination-generated fluids were placed into containers, sampled and disposed into the NAS Whiting Field water treatment facility on July 1, 2002.

## 4.7 Surveying

The sample nodes at each site were surveyed at the sites prior to excavating by a State of Florida registered land surveyor. The sample points were flagged prior to excavation activities to mark the excavation boundaries. The surveys are included in Appendix A.

## 4.8 Problems Encountered

During excavation at Site 38, an unmarked electrical line was found. The line was not energized, which was confirmed on May 13, 2002, by PRI/DJI personnel, the NAS Whiting Field electrical contractor. The line was cut during excavation and the length of line within the excavation area was removed. The line beyond the excavation limits was left in place.

# **5.0 Final Inspection**

A final inspection of Site 6 was conducted on May 15, 2002. Final inspections of Sites 16 and 38 were conducted on May 23, 2002. NAS Whiting Field Public Works Representative Mr. Jim Holland performed all three inspections. No deficiencies were noted during the final inspections.

## 6.0 Conclusions

- 1. Approximately 37 cubic yards (52.17 tons) of nonhazardous soil above industrial and/or leachability criteria were removed from Site 6.
- 2. Approximately 67 cubic yards (95.37 tons) of nonhazardous soil above industrial criteria were removed from Site 16. The site still contains landfill debris throughout and some soil exceeding residential criteria.
- 3. Approximately 15 cubic yards (18.21 tons) of nonhazardous soil above residential and/or leachability criteria were removed from Site 38.
- 4. The excavated soil was transported offsite and disposed at the Springhill Landfill.
- 5. The sites were restored to their pre-construction surface grade and cover condition and after the final inspection were accepted by the Navy.
- 6. The removal actions at these sites achieved their objectives (Section 1.3) and were conducted in accordance with regulatory standards.

## 7.0 References

CH2M HILL Constructors, Inc. 2001a. Work Plan Addendum No. 03, Interim Removal Action at Sites 6, 16 and 38, NAS Whiting Field, Milton, Florida.

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# Appendix A Survey Data

## APPENDIX A1 Survey Data Site 6, NAS Whiting Field

Note:

Horizontal Datum is NAD (North American Datum) 83 (1990) SPC Fl. N. US Survey Ft.

Vertical Datum is	NAVD (North	American \	Vertical Datum) 88.
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D	escription		North Coordinate (feet NAD)		Coordinate et NAD)	Ground Elevation (feet NAVD)		
Survey Control	Points :							
601 (Re Bar &	Cap)		629779.1185 1177628.9593			186.01		
602 (Re Bar &	Cap)		629654.2418	117	8125.1167	17	9.17	
5000 (most we	sterly elevated t	ank)	631519.1265	117	7642.1999			
Description	North Coordinate (feet NAD)	East Coordinate (feet NAD)	Ground Elevation (feet NAVD)	Description	North Coordinate (feet NAD)	East Coordinate (feet NAD)	Ground Elevation (feet NAVD)	
Grid 6SB03 :				Grid 6SB04 :				
6SB03	629566.27	1178117.53	174.1	6SB04	629630.09	1178167.24	173.9	
6 <b>SS</b> 05	629619.33	1178117.01	178.3	6SS28	629682.97	1178166.89	178.7	
6SS06	629601.83	1178134.78	176.0	6SS29	629665.48	1178184.49	176.3	
6SS07	629584.37	1178152.61	176.2	6SS30	629647.84	1178202.60	176.4	
6SS08	629566.94	1178170.39	177.7	6SS31	629630.30	1178220.51	177.3	
6 <b>SS</b> 09	629601.93	1178099.40	177.7	6SS32	629665.35	1178149.42	178.7	
6SS10	629584.20	1178117.60	175.6	6SS33	629647.69	1178166.97	176.6	
6SS11	629566.35	1178135.12	176.3	6SS34	629630.24	1178184.94	175.4	
6SS12	629549.00	1178152.93	177.6	6 <b>SS</b> 35	629612.64	1178202.68	177.0	
6SS13	629566.26	1178124.70	175.1	6SS36	629637.05	1178167.13	174.5	
6SS14	629559.65	1178117.74	175.4	6SS37	629630.10	1178174.60	174.0	
6SS15	629573.20	1178117.17	174.9	6SS38	629629.90	1178160.42	174.8	
6SS16	629566.63	1178110.32	175.0	6SS39	629622.81	1178167.51	174.1	
6SS17	629584.55	1178082.12	178.1	6SS40	629647.96	1178132.07	178.8	
6SS18	629566.64	1178099.69	176.5	6SS41	629630.04	1178149.60	177.2	
6SS19	629548.67	1178117.43	176.3	6SS42	629612.24	1178167.11	174.9	
6SS20	629531.12	1178135.42	177.5	<b>6SS4</b> 3	629594.90	1178184.74	177.0	
6SS21	629566.77	1178064.33	178.2	6 <b>SS</b> 44	629630.25	1178114.46	179.1	
6 <b>SS</b> 22	629548.87	1178082.18	176.8	6 <b>SS</b> 45	629612.72	1178131.92	177.5	
6SS23	629530.94	1178099.79	176.1	6SS46	629594.79	1178149.67	174.6	
6SS24	629512.97	1178117.57	177.4	6SS47	629577.12	1178167.09	177.1	

PREPARED BY:

KENNETH R. WENGLER 3011 S.W. WILLISTON ROAD GAINESVILLE, FL 32608-3928

(352) 335-7991

NOT VALID UNLESS SIGNED AND SEALED WITH EMBOSSED STAMP.

CERTIFICATION:

I HEREBY CERTIFY THAT THIS IS AN ACCURATE REPRESENTATION OF A FIELD SURVEY MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS 36-AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 61G17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

 $MP. \mathcal{A}$ 

KENNETH R. WENGLER, FL. REG. NO. 3413

DATE

DATE OF SURVEY: August 8-9, 2001 (

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APPENDIXA1.DOC A1-2

## **APPENDIX A2** Survey Data

Site 16, NAS Whiting Field

Horizontal Datum is NAD (North American Datum) 83 (1990) SPC Fl. N. US Survey Ft. Vertical Datum is NAVD (North American Vertical Datum) 88.

Description	North Coordinate (feet NAD)	East Coordinate (feet NAD)	Ground Elevation (feet NAVD)
Survey Control Points :			- 1.1. *********************************
30 (PK & Washer)	627131.17	1174297.41	87.54
50 (Re Bar & Cap)	626383.99	1173959.44	53.52
51 (1X2 Stake 16SO0601)	626316.07	1173772.72	50.17
Grid 16SO0601 :			
16SO1801	626353.20	1173734.70	51.5
16SO1901	626353.30	1173759.90	51.3
16SO2001	626350.90	1173784.90	51.5
16SO2101	626353.80	1173809.90	51.4
16SO2201	626329.10	1173809.90	52.0
16SO2301	626328.60	1173784.90	50.6
16SO2401	626328.60	1173759.90	51.7
16SO2501	626328.10	1173735.10	52.1
16SO2601	626303.20	1173735.30	51.9
16SO2701	626303.10	1173760.00	53.1
16SO2801	626303.90	1173785.30	52.2
16SO2901	626303.80	1173810.40	51.8
16SO3001	626279.00	1173810.50	51.0
16SO3101	626278.90	1173785.70	50.6
16SO3201	626278.50	1173760.60	50.4
16SO3301	626278.00	1173735.30	50.7
16SO3401	626320.90	1173767.80	50.9
16SO3501	626321.20	1173777.70	50.3
16SO3601	626311.20	1173777.70	50.9
16SO3701	626311.00	1173767.80	51.7

PREPARED BY:

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BY:

I HEREBY CERTIFY THAT THIS IS AN ACCURATE REPRESENTATION OF A FIELD SURVEY MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM TECHNICAL STANDARDS 36-AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 61G17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

DATE OF SURVEY: March 21, 2001

APPENDIXA2.DOC

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## **APPENDIX A3** Survey Data

Site 38, NAS Whiting Field

Horizontal Datum is NAD (North American Datum) 83 (1990) SPC Fl. N. US Survey Ft. Vertical Datum is NAVD (North American Vertical Datum) 88.

Description			North Coordinate (feet NAD)	East Coordinate (feet NAD)		Ground Elevation (feet NAVD)		
Survey Control	Points :		-					
382 (PK & Wa	sher)		635496.6192	117	8589.6734	15	6.155	
383 (Re Bar &	Cap)		636740.6646	117	8241.2586	17	4.44	
Description	North Coordinate (feet NAD)	East Coordinate (feet NAD)	Ground Elevation (feet NAVD)	Description	North Coordinate (feet NAD)	East Coordinate (feet NAD)	Ground Elevation (feet NAVD)	
Grid 38SS11:				Grid 38SS12 :	<del></del>			
38SS11	636731.71	1178176.80	168.6	38SS12	636702.71	1178194.70	167.8	
38SS17	636741.74	1178166.84	168.0	38 <b>SS</b> 32	636712.52	1178184.77	168.5	
38SS18	636741.66	1178176.85	169.4	38SS33	636712.63	1178194.61	169.1	
38SS19	636741.74	1178186.69	170.2	38SS34	636712.73	1178204.67	169.5	
38SS20	636736.77	1178171.94	168.5	38SS35	636707.52	1178189.62	168.1	
38SS21	636736.76	1178181.74	169.6	38SS36	636707.75	1178199.68	168.6	
38SS22	636731.78	1178166.90	167.4	38SS37	636702.56	1178184.66	166.5	
38SS23	636731.67	1178186.47	169.9	38SS38	636697.78	1178189.65	166.4	
38SS24	636726.57	1178172.13	167.5	38SS39	636692.69	1178184.54	164.5	
38SS25	636726.89	1178181.82	169.1					
38SS26	636721.43	1178167.01	166.3					
38SS27	636721.59	1178176.98	168.2					
38SS28	636723.43	1178186.19	170.4					

PREPARED BY:

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(352) 335-7991

NOT VALID UNLESS SIGNED AND SEALED WITH EMBOSSED STAMP. CERTIFICATION:

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BY:

DATE OF SURVEY: August 8-9, 2001

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APPENDIXA3.DOC

## Appendix B

**Testing Plan and Log** 

## **Testing Plan and Log**

Contract N	umber:	CTO No.:			CTO Title:						Location:		
N62467-98	-D-0995	0011			NAS Whiting Field						Milton, FL		
		-		T	TVAO TTIILING FIEID						IVIII.OH, FE		
Activity	Test Required	Sampler	Lab	COC#	Sample #	Matrix	Sample Type	Location	Depth	Date Test Made	Analysis Req'd	Test Results - See SAP for complete test results	Remarks
Site 6						T	i		†				
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SS1302-0809-01	Soil	Composite	6SS13	0-2'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SB1307-0809-01	Soil	Composite	6SS13	5-7'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SB1308-0809-01	Soil	Composite	6SS13	7-8'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	<del></del>
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SB1309-0809-01	Soil	Composite	6SS13	8-9'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SS1402-0809-01	Soil	Composite	6\$\$14	0-2'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SB1407-0809-01	Soil	Composite	6SS14	5-7'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010809-01	011-6SB1408-0809-01	Soil	Composite	6SS14	7-8'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SB1409-0809-01	Soil	Composite	6SS14	8-9'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SS1502-0809-01	Soil	Composite	6SS15	0-2'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-01	011-6SB1507-0809-01	Soil	Composite	6SS15	5-7'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB1508-0809-01	Soil	Composite	6 <b>SS</b> 15	7-8'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB1509-0809-01	Soil	Composite	6SS15	8-9,	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SS1602-0809-01	Soil	Composite	6SS16	0-2'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB1607-0809-01	Soil	Composite	6SS16	5-7'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010809-02	011-6SB1608-0809-01	Soil	Composite	6SS16	7-8'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB1609-0809-01	Soil	Composite	6SS16	8-9'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB0307-0809-01	Soil	Composite	6SS03	5-7'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB0308-0809-01	Soil	Composite	6SS03	7-8'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-02	011-6SB0309-0809-01	Soil	Composite	6SS03	8-9	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-03	011-6SS2502-0809-01	Soil	Composite	6SS14 FD	0-2'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-03	011-6SB2607-0809-01	Soil	Composite	6SS14 FD	5-7'	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-03	011-6SS5202-0809-01	Soil	Composite	6SS14/MS	NA	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-03	011-6SS5302-0809-01	Soil	Composite	6SS14/MSD	NA	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-03	011-6-Pre-EB01-0809-01	Water	Grab	NA	NA	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-03	011-6-Post-EB01-0809-01	Water	Grab	NA	NA	09-Aug-2001	SW8310 (Benzo-A-Pyrene Only)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS3602-0809-01	Soil	Composite	6SS36	0-2'	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS3702-0809-01	Soil	Composite	6SS37	0-2'	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS3802-0809-01	Soil	Composite	6SS38	0-2'	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS3902-0809-01	Soil	Composite	6SS39	0-2'	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS2702-0809-01	Soil	Composite	6SS38 FD	0-2'	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS5402-0809-01	Soil	Composite	6SS38/MS	NA	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6SS5502-0809-01	Soil	Composite	6SS38/MSD	NA	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6-Pre-EB02-0809-01	Water	Grab	NA	NA	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010809-04	011-6-Post-EB02-0809-01	Water	Grab	NA	NA	09-Aug-2001	FL-PRO (TRPH)	See PEL #2108063	
<b></b>		ļ				ļ					1011/00000		
Soil Sample	Waste Profile	CCI /HILL	PEL Labs	151168-011204-01A	011-6-DP-01-S-5	Soil	Composite	Site 6, 6 Aliquots	0'-5'	04-Jan-2002	1311/8260B,1311/8270C,1311/8081A,1311/ 8151,1311/6010B,TPH/FL- PRO&8082,1030&9045A,Chapter 7.3	See PEL #2112061	
Site 16		<del>   </del>							<b> </b>			ļ <u> </u>	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010807-01	011-16-1801-S-0807-01	Soil	Composito	16001001		07 Aug 0004	OM/CO-CO	Augiting Desile	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010807-01	011-16-1901-S-0807-01	Soil	Composite Composite	16SO1801 16SO1901	0-2' 0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010807-01	011-16-1901-S-0807-01	Soil	Composite	16SO2001	0-2	07-Aug-2001	SW8310 SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-01	011-16-2101-S-08076-01	Soil	Composite	16SO2001 16SO2101	0-2	07-Aug-2001	SW8310 SW8310	Awaiting Results	
campic	CON OTIGIACI.	1 001/111111	· LL LAUS	101100-010007-01	011-10-2101-3-000/0-01	JUII	Composite	10302101	0-2	07-Aug-2001	SW8310	Awaiting Results	

Rev 0: 08FEB02

## **Testing Plan and Log**

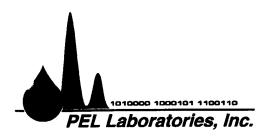
Contract I	Number:	CTO No.	<del></del>		CTO Title:						Location:		
N62467-98		0011											
102467-98	3-D-0995	0011			NAS Whiting Field		<del></del>				Milton, FL		
Activity	Test Required	Sampler	Lab	COC#	Sample #	Matrix	Sample Type	Location	Depth	Date Test Made	Analysis Req'd	Test Results - See SAP for complete test results	Remarks
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-01	011-16-2201-S-0876-01	Soil	Composite	16SO2201	0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs		011-16-2301-S-0876-01	Soil	Composite	16SO2301	0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs		011-16-2401-S-0807-01	Soil	Composite	16SO2401	0-2'	07-Aug-2001	SW8310	See PEL #2108134	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs		011-16-2501-S-0807-01	Soil	Composite	16SO2501	0-2	07-Aug-2001	SW8310	See PEL #2108134	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010807-01	011-16-2601-S-0807-01	Soil	Composite	16SO2601	0-2'	07-Aug-2001	SW8310	See PEL #2108134	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-01	011-16-2701-S-0807-01	Soil	Composite	16SO2701	0-2'	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs		011-16-2801-S-0807-01	Soil	Composite	16SO2801	0-2'	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs		011-16-2901-S-0807-01	Soil	Composite	16SO2901	0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs		011-16-3001-S-0807-01	Soil	Composite	16SO3001	0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-02	011-16-3101-S-0807-01	Soil	Composite	16SO3101	0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010807-02	011-16-3201-S-0807-01	Soil	Composite	16SO3201	0-6"	07-Aug-2001	SW8310	See PEL #2108134	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-02	011-16-3301-S-0807-01	Soil	Composite	16SO3301	0-1'	07-Aug-2001	SW8310	See PEL #2108134	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-02	011-16-3401-S-0807-01	Soil	Composite	16SO3401	0-2'	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-02	011-16-3501-S-0807-01	Soil	Composite	16SO3501	0-2'	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-02	011-16-3601-S-0807-01	Soil	Composite	16SO3601	0-2'	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-02	011-16-3701-S-0807-01	Soil	Composite	16SO3701	0-2'	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-03	011-16-3801-S-0807-01	Soil	Composite	16SO3801	0-2'	07-Aug-2001	SW8310	See PEL #2108033	FDup of 16SO3601
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-03	011-16-3901-0807-01	Soil	Composite	16SO3901	0-2'	07-Aug-2001	SW8310	Awaiting Results	FDup of 16SO2701
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-03	011-16-2701-0807-01	Soil	Composite	16SO2701/MS	0-2'	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-03	011-16-2701-0807-01	Soil	Composite	16SO2701/MSD	0-2	07-Aug-2001	SW8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-03	011-16-PREEB-EB-0807-01	Water	Grab	Pre-EB	NA	07-Aug-2001	SW8310	See PEL #2108033	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010807-03	011-16-PostEB-EB-0807-01	Water	Grab	Post-EB	NA	07-Aug-2001	SW8310	See PEL #2108033	
ļI				<b></b> '									
Soil Sample	Waste Profile	CCI /HILL	PEL Labs	151168-011204-01A	011-16-DP-01-S-2	Soil	Composite	Site 16, 5 Aliquots	0'-2'	04-Jan-2002	1311/8260B,1311/8270C,1311/8081A,1311/ 8151,1311/8010B,TPH/FL- PRO&8082,1030&9045A,Chapter 7.3	See STL #S1-16861	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-020510-01	011-16-PREEB-EB-01	Water	Grab	Dec EB	1 N/A	±0.14=1,0000			
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-020510-01	011-16-CS-S-01			Pre-EB	N/A	10-May-2002	PAHs by 8310	Awaiting Results	
Soil Sample	Soil Charact.		PEL Labs	151168-020510-01	011-16-CS-S-01	Soil Soil	Composite	Sample #1 Bottom	2'-3'	10-May-2002	PAHs by 8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-020510-01	011-16-CS-S-02-MS		Composite	Sample #2 Bottom	2'-3'	10-May-2002	PAHs by 8310	Awaiting Results	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-020510-01		Soil	Composite	Sample #2 Bottom-MS	2'-3'	10-May-2002	PAHs by 8310	Awaiting Results	
Gen Genipis	Jon Onaract.	COLLINE	PEL Laus	151100-020510-01	011-16-CS-S-02-SD	Soil	Composite	Sample #2 Bottom-SD	2'-3'	10-May-2002	PAHs by 8310	Awaiting Results	
WaterSamp	Disposal Charact.	CCI /HILL	PEL Labs	151168-020523-01	011-16DP-01	Water	Grab	Decon Water Drums(3)	N/A	23-May-2002	8260,8270,FL- PRO,8081&8151,8082,Metals,CN,Flash,pH/ Corr., React./Sulfide	Awaiting Results	
				i		$\overline{}$	, <del></del>		$\overline{}$				
Site 38			(			<del></del>	$\overline{}$		$\overline{}$				
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010810-01	011-38SS20-S-0810-01	Soil	Composite	38\$S20	0-2'	10-Aug-2001	8081 A & FL-PRO (alpha-Cloradane, gamma Chloradane, & heptachlor epoxide only)	See PEL # 2108078	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010810-01	011-38SS21-S-0810-01	Soil	Composite	38SS21	0-2'	10-Aug-2001	8081A & FL-PRO (alpha-Cloradane, gamma Chloradane, & heptachlor epoxide only)	See PEL # 2108078	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010810-01	011-38SS24-S-0810-01	Soil	Composite	38SS24	0-2'	10-Aug-2001	8081A & FL-PRO (alpha-Cloradane, gamma Chloradane, & heptachlor epoxide only)	See PEL # 2108078	

## **Testing Plan and Log**

Contract N	lumber:	CTO No.:			CTO Title:		•				Location:		
N62467-98		0011			NAS Whiting Field						Milton, FL		ļ
Activity	Test Required	Sampler	Lab	COC#	Sample #	Matrix	Sample Type	Location	Depth	Date Test Made	Analyeis Fleq'd	Test Results - See SAP for complete test results	Remarks
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010810-01	011-38SS25-S-0810-01	Soil	Composite	38SS25	0-2'	10-Aug-2001	8081A & FL-PRO (alpha-Cloradane, gamma Chloradane, & heptachlor spoxide only)	See PEL # 2108078	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010810-01	011-38SS29-S-0810-01	Soil	Composite	38SS29	0-2'	10-Aug-2001	8081A & FL-PRO (alpha-Cloradane, gamma Chloradane, & heptachlor epoxide only)	See PEL # 2108078	Duplicate of 38SS20
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010810-01	011-38SS20-S-0810-01	Soil	Composite	38SS20	0-2	10-Aug-2001	8081A & FL-PRO (alpha-Chloradane, gamma-Chloradane, heptachlor epoxide, & dieldrin)	See PEL # 2108078	
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010810-01	011-38SS20-S-0810-01	Soil	Composite	38SS20	0-2'	10-Aug-2001	8081A & FL-PRO (alpha-Chioradane, gamma-Chioradane, heptachior epoxide, & dieldrin)	See PEL # 2108078	
Soil Sample	Soil Charact.		PEL Labs	151168-010810-01	011-38PREEB01-W-0810-01	Water	Grab	PRE-EQUIP.	NA	10-Aug-2001	8081A & FL-PRO	See PEL # 2108078	-
Soil Sample	Soil Charact.		PEL Labs	151168-010810-01	011-38POSTEB01-W-0810-01	Water	Grab	POST-EQUIP.	NA	10-Aug-2001	8081A & FL-PRO	See PEL # 2108078	
Soil Sample	Soil Charact.		PEL Labs	151168-010810-02	011-38SS35-S-0810-01	Soil	Composite	38SS35	0-2'	10-Aug-2001	8081A (heptachlor epoxide & dieldrin)	See PEL # 2108078	
Soil Sample	Soil Charact.		PEL Labs	151168-010810-02	011-38SS36-S-0810-01	Soil	Composite	38SS36	0-2'	10-Aug-2001	8081A (heptachlor epoxide & dieldrin)	See PEL # 2108078	
Soil Sample	Soil Charact.			151168-010810-02	011-38\$\$38-\$-0810-01	Soil	Composite	38SS38	0-2'	10-Aug-2001	8081A (heptachlor epoxide & dieldrin)	See PEL # 2108078	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010810-02	011-38SS2040-S-0810-01	Soil	Composite	38SS40	0-2'	10-Aug-2001	8081A (heptachlor epoxicle & dieldrin)	See PEL # 2108078	<b>38SS</b> 35
							· ·						
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38SO11-S-3	Soil	Composite	38SO11	2'-3'	19-Sep-2001	8081A, FL-PRO, & SPLP (alpha-Cloradene, gamma-Chloradene, & heptachlor epoxide only)	See PEL #2109093	Hold SPLP
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38SO11-S-6	Soil	Composite	38SO11	5'-6'	19-Sep-2001	8081A, FL-PRO, & SPLP (alpha-Cloradane, gamma-Chloradane, & heptachlor epoxide only)	See PEL #2109093	Hold SPLP
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38SO12-S-3	Soil	Composite	38\$012	2'-3'	19-Sep-2001	8081A, FL-PRO, & SPLP (alpha- Chloradane, gamma-Chloradane, heptachlor epoxide, & delidrin)	See PEL #2109093	Hold SPLP
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38SO12-S-6	Soil	Composite	38SO12	5'-6'	19-Sep-2001	8081A, FL-PRIO, & SPLP (alpha- Chioradane, gamma-Chioradane, heptachio: epoxéde, & delidrin)	See PEL #2109093	Hold SPLP
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38SO13-S-3	Soil	Composite	38\$012	2'-3'	19-Sep-2001	6081A, FL-PRO, & SPLP (alpha- Chioradane, gamma-Chioradane, heptachlor epoxide, & delidrin)	See PEL #2109093	Hold SPLP/Dup of 12-S-3
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010919-02	011-38SO12-S-3	Soil	Composite	38\$012	2'-3'	19-Sep-2001	8081A, FL-PRO, & SPLP (alpha- Chioradane, gamma-Chioradane, heptachior eposide, & delidrin)	See PEL #2109093	Hold SPLP
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38SO12-S-3	Soil	Composite	38\$012	2'-3'	19-Sep-2001	8081A, FL-PRO, & SPLP (alpha- Chioradane, gamma-Chioradane, heptachior epoxide, & delibrin)	See PEL #2109093	Hold SPLP
Soil Sample	Soil Charact.	CCI/HILL	PEL Labs	151168-010919-02	011-38PREEB02-W	Water	Grab	NA	NA	19-Sep-2001	8081A & FL-PRO	See PEL #2109093	
Soil Sample	Soil Charact.	CCI /HILL	PEL Labs	151168-010919-02	011-38POSTEB02-W	Water	Grab	NA	NA	19-Sep-2001	8081A & FL-PRO	See PEL #2109093	
	Jon Orkeldot.										1311/82808,1311/8270C,1311/8081A,1311/		
Soil Sample	Waste Profile	CCI/HILL	PEL Labs	151168-011204-01A	011-38-DP-01-S-2	Soil	Composite	Site 38, 6 Aliquots	0'-2'	04-Jan-2002	8151,1311/6010B,TPH/FL- PRO&6082,1030&9045A,Chapter 7.3	See STL #S1-16861	
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BorrowPit Soil Sample	Fill Material Profile	CCI/HILL	PEL Labs	151168-020304-01	011-FILLMAT-01	Soil	Comp/Grab	NASWF Borrow Pit	1'	04-Mar-2002	5035/8260B,8270C,8081A,8082,8010A747 1,9045B,8151A,FL-PRO,8021	Awaiting Results	
	Fill Material Profile		PEL Labs	151168-020304-01	011-TRIPB-01	Water	Grab	NASWF Borrow Pit	N/A	04-Mar-2002	8260B/8021	Awaiting Results	

## Appendix C

**Waste Disposal Sampling Laboratory Analytical Results** 



**Customer Name:** 

CH2MHILL

Date & Time Received:

1-7-02; 10:50 AM

**Date Reported:** 

1-19-02

PEL Submission Number: 2112061

**Project:** 

Whiting Field (Site 6,16, & 38)

Samples:

The submission consisted of 3 samples with sample identification shown in the

attached data tables.

Tests:

The samples were analyzed for EPA method:

101, 6010, 7471, 1311-8081, 8082, 1311/8151, 1311/8260, 1311/8270, 9045,

FLPRO, and Reactivity

Results:

See the attached data tables for results.

## Distribution of Reports:

1-CH2MHILL

Attn: Tatiana Romanova Phone: (770) 604-9182

2-CH2MHILL

Attn: Amy Twitty Phone: (850) 939-8300

Respectfully Submitted.

**Brian Spann** 

Laboratory Manager PEL Laboratories, Inc.

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. PEL letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualitities of apparently identical or similar materials.

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Sample Data QC Summary	50 50
Standards Data	79
METHOD8082 GC/ ECD PCB ORGANICS	100
Sample Data	104
QC Summary	108
Standards Data	119
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# **Organics**

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## **Organic Data Qualifiers**

- U Indicates the compound was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that compound. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when incicated.
- J Indicates estimated value. It is used when the data indicates the presence of a compound above the method MDL yet lower than the reporting limit.
- B Indicates the analyte was found in the associated bland as well as in the sample. The notation indicates possible contamination of the sample.
- E Indicates the value reported is above the highest calibration standard for that compound. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result will be reported on another Form 1.
- D Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.
- C The "C" flag indicates the presence of this compound has been confirmed by GC/MS analysis.
- P This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns. The lower of the two values is reported on Form 1 with a "P" code.
- N This qualifier indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as clorinated hydrocarbon, the "N" qualifier is not used.
- A This qualifier indicates that a TIC is suspected aldol-condensation product.
- M This qualifier indicates that the compound is reported as a summation of analyte isomers.
- X Data flagged as rejected by analyst utilizing analytical judgement.

## **Organic Sample ID Qualifiers**

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for organic analysis are defined below:

- Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

180102 1941

# GC/MS VOLATILE ORGANICS METHOD 8260

180102 1941

#### CASE NARRATIVE GC/MS VOLATILE ORGANICS

PEL Lab Reference No./SDG: 2112061

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA 8260B/SW846

#### IV. PREPARATION

The TCLP samples were prepared by EPA 1311/SW846 for volatiles analysis. All aspects of sample preparation proceeded without exception.

## V. ANALYSIS

## A. Calibration:

All acceptance criteria were met.

#### B. Blanks:

The blank analyzed with the TCLP samples met all criteria.

## C. Surrogates:

All surrogate criteria were met.

#### CASE NARRATIVE GC/MS VOLATILE ORGANICS

#### PEL Lab Reference No./SDG: 2112061

#### D. Spikes:

**Laboratory Control Samples (LCS)** 

One LCS was analyzed with the TCLP samples where all criteria were met for percent recovery.

Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

The client did not specify an MS/SD set to be analyzed. Client sample 01138DP01S2 was analyzed as an MS/SD where all criteria were met.

#### E. Internal standards:

All internal standard criteria were met.

### F. Samples:

Sample analysis proceeded normally. Client specific reporting limits were used. The TCLP samples were analyzed at a dilution of 1:10 per PEL protocol. All results are reported in Mg/L.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

SIGNED: fra (els DATE: 01/15/02

## **VOLATILE ORGANIC CROSS REFERENCE TABLE**

Lab Name:	PEL Lab	oratories, Inc.	Contract: Whiting Fld					
Lab Code :	PEL	Case No.	SAS No:	SDG No.: 2112061				
		Method:	8260	<b></b>				
¥	v.	EPA Sample No	Lab Sample ID					
		01138DP01S2		211206101				
		0116DP01S5		211206102				
		01116DP01S2	*****	211206103				

180102 19

Sample Data

# 1 VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 01138DP01S2 Lab Name: PEL Laboratories, Inc. Contract: Whiting Fld Lab Code : PEL Case No. SAS No: SDG No.: 2112061 Matrix: WATER Lab Sample ID: 211206101 Lab File ID 06101.D Sample wt/vol: 5 Units: ML Date Received: 01/07/02 Concentrated Extract Volume: 5 Date Extracted: Level:(low/med) LOW Date Analyzed: 01/11/02 Time: 2004 PercentSolids: 0 decanted: Dilution Factor: 10 Extraction: PURGETRAP GPC Cleanup : ( Y/N ) \_\_\_\_\_ pH: \_\_\_\_ ID: 0.18 Column(1): DB-624 (mm) CONCENTRATION UNITS: MGAL **TCLP Analysis** 

CAS NO.	ANALYTE	RESULT	Q
75-01-4	Vinyl chloride	0.1	U
75-35-4	1,1-Dichloroethene	0.1	U
78 <b>-9</b> 3-3	2-Butanone	0.4	U
67-66-3	Chloroform	0.1	U
56-23-5	Carbon tetrachioride	0.1	U
71-43-2	Benzene	0.1	U
107-06-2	1,2-Dichloroethane	0.1	U
79-01-6	Trichloroethene	0.1	U ,
127-18-4	Tetrachloroethene	0.1	U *
108-90-7	Chlorobenzene	0.1	U
106-46-7	1,4-Dichlorobenzene	0.1	U

Form I

180102 1941

# 1 VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 0116DP01S5 Lab Name: PEL Laboratories, Inc. Contract: Whiting Fld Case No. Lab Code: PEL SAS No: SDG No.: 2112061 Matrix: WATER Sample wt/vol: 5 Units: ML Date Received: 01/07/02 Concentrated Extract Volume: 5 Date Extracted: Level:(low/med) LOW Date Analyzed: 01/11/02 Time: 2030 0 PercentSolids: \_\_\_\_\_decanted: \_\_\_\_\_ Dilution Factor: 10 Extraction: PURGETRAP Station ID: 6,0-5ft Method: 8260 GPC Cleanup: (Y/N) pH: Column(1): DB-624 ID: 0.18 (mm) CONCENTRATION UNITS: MGAL **TCLP Analysis** CAS NO. **ANALYTE** RESULT Q 75-01-4 Vinyl chloride 0.1 U 75-35-4 1,1-Dichloroethene 0.1 U 78-93-3 2-Butanone 0.4 U 67-66-3 Chloroform U 0.1 56-23-5 Carbon tetrachloride 0.1 U 71-43-2 Benzene 0.1 U 107-06-2 1,2-Dichloroethane 0.1 U 79-01-6 Trichloroethene 0.1 U

0.1

0.1

0.1

Form !

U

U

127-18-4

108-90-7

106-46-7

180102 1941

Tetrachloroethene

1,4-Dichlorobenzene

Chlorobenzene

1

#### **VOLATILE ORGANIC ANALYSIS DATA SHEET**

EPA Sample No. Lab Name: PEL Laboratories, Inc. 01116DP01S2 Contract: Whiting Fld Case No. Lab Code: PEL SAS No: SDG No.: 2112061 Matrix: WATER Lab Sample ID: 211206103 Lab File ID 06103.D Sample wt/vol: 5 Units: ML Date Received: 01/07/02 Concentrated Extract Volume: 5 Date Extracted: Level:(low/med) LOW Date Analyzed: 01/11/02 Time: 0 decanted : PercentSolids: Dilution Factor: 10 Extraction: PURGETRAP Station ID: 16,0-2ft Method: 8260 GPC Cleanup: (Y/N) \_\_\_\_ pH: Column(1): DB-624 ID: 0.18 (mm) CONCENTRATION UNITS: MGAL **TCLP Analysis** CAS NO. **ANALYTE** RESULT Q 75-01-4 Vinvi chloride 0.1 U 75-35-4 1,1-Dichloroethene 0.1 U 78-93-3 2-Butanone 0.4 U Chloroform 67-66-3 0.1 U 56-23-5 Carbon tetrachloride 0.1 U 71-43-2 Benzene 0.1 U 107-06-2 1,2-Dichloroethane 0.1 U 79-01-6 Trichloroethene 0.1 U

0.1

0.1

0.1

U

U

U

127-18-4

108-90-7

106-46-7

Tetrachloroethene

1,4-Dichlorobenzene

Chlorobenzene

## GC/ECD PESTICIDE ORGANICS METHOD 8081

## CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2112061

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
  - B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA SW846 8081

#### IV. PREPARATION

Soil samples were prepared by EPA SW846 3550 for 8081 semi-volatiles analysis.

#### V. ANALYSIS

#### A. Calibration:

All calibration criteria were met.

#### B. Blanks:

All blank criteria were met.

#### C. Surrogates:

All surrogate criteria were met.

#### D. Spikes:

Laboratory Control Spikes (LCS)

All LCS criteria were met.

Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

All MS/SD criteria were met.

#### E. Internal standards:

All internal standard criteria were met.

#### CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2112061

#### F. Samples:

Sample analysis proceeded normally. Data was collected using dual column analysis. Please note that the higher value of the two columns is reported, unless the %D between the two columns is >40%, in which case the lower of the two values is reported. Project specific RLs were used per client request. Soil samples are reported on a dry weight basis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNEDI DATE: 1-18-Q

#### PESTICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name:	PEL Laboratories, Inc.		Contract:	Whiting Fld	
Lab Code :	PEL	Case No.	SAS No:	SDG No.: 2112061	
		Method:	8081	<del></del>	
	š	EPA Sample No		Lab Sample ID	
		01138DP01S2		211206101	
		0116DP01S5		211206102	
		01116DP01S2	*******	211206103	

Sample Data

1

#### PESTICIDE ORGANIC ANALYSIS DATA SHEET

			nple No.	
Contract: Whiting Fld		01138DP01S2		
4114444444	SDG	No.: 2112061	<b> </b>	
D: 2112061	<u>)1</u>	Lab File ID_6	5101.D	
d: 01/07/02	<u> </u>			
d: 01/09/02	) -		*************	
d: 01/14/02	· · · · · · · · · · · · · · · · · · ·	Time: 21	45	
or: 1				
38,0-2ft		Method: 808	31	
: RTX-1701		ID: 0.53	(mm)	
	***********			
	******************	••	<u> </u>	
ILT .	Q	••	**********	
ILT '	_	••	**********	
ILT	Q	••	**********	
ILT '	Q	••	400000000000	
ILT '	<b>Q</b> U	••	400000000000	
ILT	<b>Q</b> U U U	••	400000000000	
	<b>Q</b> U U U U	••	**********	
	D: 21120610 ed: 01/07/02 ed: 01/09/02 ed: 01/14/02 or: 1 38,0-2ft	ID: 211206101 ed: 01/07/02 ed: 01/09/02 ed: 01/14/02 or: 1 38,0-2ft	ed: 01/09/02 ed: 01/14/02 Time: 21 or: 1 38,0-2ft Method: 808	

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

180102 1941

Form I

#### PESTICIDE ORGANIC ANALYSIS DATA SHEET

				EPA Sample No.
Lab Name:	PEL Laboratories, Inc.	Contract: Whiting Fld	0116DP01S5	
Lab Code : PEL Case No.		SAS No: SDG No.: 2112061		
Matrix: W	ATER	Lab Sample ID: 21120	6102	Lab File ID 6102.D
Sample wt/vo	l: 925 Units: ML	Date Received: 01/07	/02	
Concentrated	Extract Volume: 10	Date Extracted: 01/09	/02	
Level:(low/me	ed) LOW	Date Analyzed: 01/14	/02	Time: 2215
PercentSolids	e: 0 decanted:			
Extraction:	SEPF	Station ID: 6,0-5ft		Method: 8081
GPC Cleanup	):(Y/N) N pH:			
Column(1):	XTI-5 ID: 0.53 (n	nm) Column(2): RTX-17	01	ID: 0.53 (mm)
CONCENTRA	ATION UNITS: MGAL			TCLP Analysis
CAS NO.	ANALYTE	RESULT	Q	
58-89-9	gamma-BHC (Lindane)	0.0022	U	
76-44-8	Heptachior	0.0022	U	
1024-57-3	Heptachlor epoxide	0.0022	U	
72-20-8	Endrin	0.0022	U	
72-43-5	Methoxychlor	0.0216	U	
57-74-9	Chlordane	0.0216	U	
8001-35-2	Toxaphene	0.108	U	

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

#### PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 01116DP01S2 Lab Name: PEL Laboratories, Inc. Contract: Whiting Fld SAS No: Case No. Lab Code: PEL SDG No.: 2112061 Matrix: WATER Lab Sample ID: 211206103 Lab File ID 6103.D Sample wt/vol: 945 Units: ML Date Received: 01/07/02 Concentrated Extract Volume: 10 Date Extracted: 01/09/02 Level:(low/med) LOW Date Analyzed: 01/14/02 Time: 2244 decanted : \_\_\_\_ PercentSolids: Dilution Factor: 1 Extraction: SEPF Station ID: 16,0-2ft Method: 8081 GPC Cleanup: (Y/N) pН: (mm) Column(2): RTX-1701 Column(1): XTI-5 ID: 0.53 ID: 0.53 (mm) CONCENTRATION UNITS: MG/L TCLP Analysis CAS NO. **ANALYTE** RESULT Q 58-89-9 gamma-BHC (Lindane) 0.0021 U 76-44-8 Heptachlor 0.0021 U 1024-57-3 Heptachlor epoxide 0.0021 U 72-20-8 **Endrin** 0.0021 U 72-43-5 Methoxychlor 0.0212 U 57-74-9 Chlordane 0.0212 U 8001-35-2 Toxaphene 0.106 U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

# GC/ECD HERBICIDE ORGANICS METHOD 8151

## CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 21112061

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA SW846 8151

#### IV. PREPARATION

TCLP samples were prepared by EPA SW846 1311 prior to 8151 semi-volatiles preparation. Water samples were prepared by EPA SW846 3510 for 8151 semi-volatiles analysis.

#### V. ANALYSIS

#### A. Calibration:

All acceptance criteria were met. The secondary standard for 2,4-D on the secondary column does not meet criteria for one of the columns. This is due to the secondary standard being a methylated standard, where as the curve is derivitized. The compound 2,4-D in the derivitized standards has a compound co-eluting with it, thus causing the non-derivitized secondary to be below acceptable criteria.

The Herbicide standards correspond to the following calibration files for Herbicide concentration at the instrument level:

CAL1 = 0.025ug/mL

CAL2=0.05ug/mL

CAL3=0.1ug/mL

CAL4=0.15ug/mL

CAL5=0.2ug/mL

CAL6=0.25ug/mL

CAL7=0.3ug/mL

#### B. Blanks:

All blank criteria were met.

#### C. Surrogates:

All surrogate criteria were met.

## CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2112061

D. Spikes:

Laboratory Control Spikes (LCS)

All LCS criteria were met.

Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

All spike criteria were met.

E. Internal standards:

All internal standard criteria were met for the TCLP samples.

F. Samples:

Sample analysis proceeded normally. Data was collected using dual column analysis. Please note that the higher value of the two columns is reported, unless the %D between the two columns is >40%, in which case the lower of the two values is reported. Project specific RLs were used per client request. Soil samples are reported on a dry weight basis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED JANA Keene DATE: 1/11/02

#### HERBICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name:	PEL Laboratories, Inc.		Contract: Whiting Fld		
Lab Code :	PEL	Case No.	SAS No:	SDG No.: 2112061	••••••
		Method:	8151		
ده ا ای ع	ř	EPA Sample No		Lab Sample ID	
		01138DP01S2		211206101	
		0116DP01S5		211206102	
		01116DP01S2		211206103	

Sample Data

#### HERBICIDE ORGANIC ANALYSIS DATA SHEET

			EPA Sample No.
Lab Name: PEL La	boratories, Inc.	Contract: Whiting F	ld 01138DP01S2
Lab Code : PEL	Case No.	SAS No:	SDG No.: 2112061
Matrix: WATER	••••••	Lab Sample ID: 21	1206101 Lab File ID 61-1.D
Sample wt/vol: 900	Units: ML	Date Received: 01	/07/02
Concentrated Extract	Volume: 10	Date Extracted: 01	/10/02
Level:(low/med) LO	<u>W</u>	Date Analyzed: 01	/18/02 Time: 0425
PercentSolids: 0	decanted :	Dilution Factor: 1	
Extraction: SEPF	**************************************	Station ID: 38,0-2ft	Method: 8151
GPC Cleanup : ( Y/N )	<u>N</u> pH:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Column(1): XTI-5	ID: 0.53	(mm) Column(2): RTX	(-1701 ID: 0.53 <u>(mm)</u>
CONCENTRATION U	NITS: MG/L		TCLP Analysis
CAS NO. ANA	LYTE	RESULT	Q
4-75-7 2,4'-0	)	0.0022	U
3-72-1 2,4,5	-TP (Silvex)	0.0022	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

1

#### HERBICIDE ORGANIC ANALYSIS DATA SHEET

			EPA Sample No.
Lab Name:	PEL Laboratories, Inc.	Contract: Whiting Fld	0116DP01S5
Lab Code:	PEL Case No.	SAS No:	SDG No.: 2112061
Matrix: W	ATER	Lab Sample ID: 21120610	02 Lab File ID 61-2.D
Sample wt/vol	: 950 Units: ML	Date Received: 01/07/02	<u>}</u>
Concentrated	Extract Volume: 10	Date Extracted: 01/10/02	<b>?</b>
Level:(low/me	d) LOW	Date Analyzed: 01/18/02	? Time: 0507
PercentSolids	: 0 decanted :	Dilution Factor: 1	
Extraction:	SEPF	Station ID: 6,0-5ft	Method: 8151
GPC Cleanup	:(Y/N) N pH:	*********	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Column(1):	XTI-5 ID: 0.53	(mm) Column(2): RTX-1701	ID: 0.53 (mm)
CONCENTRA	ATION UNITS: MGAL		TCLP Analysis
CAS NO.	ANALYTE	RESULT	Q
94-75-7	2,4'-D	0.0021	U
93-72-1	2,4,5-TP (Silvex)	0.0021	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

1

#### HERBICIDE ORGANIC ANALYSIS DATA SHEET

			EPA Sample No.
Lab Name:	PEL Laboratories, Inc.	Contract: Whiting Fld	01116DP01S2
Lab Code :	PEL Case No.	SAS No:	SDG No.: 2112061
Matrix: W	ATER	Lab Sample ID: 211206	103 Lab File ID 61-3.D
Sample wt/vo	l: 925 Units: ML	Date Received: 01/07/	02
Concentrated	Extract Volume: 10	Date Extracted: 01/10/	02
Level:(low/me	ed) LOW	Date Analyzed: 01/18/	02 Time: 0549
PercentSolids	c: 0 decanted:	Dilution Factor: 1	
Extraction:	SEPF	Station ID: 16,0-2ft	Method: 8151
GPC Cleanup	):(Y/N) N pH:	***************************************	
Column(1):	XTI-5 ID: 0.53	(mm) Column(2): RTX-170	01 ID: 0.53 (mm)
CONCENTRA	ATION UNITS: MGAL		TCLP Analysis
CAS NO.	ANALYTE	RESULT	Q
94-75-7	2,4'-D	0.0022	U
93-72-1	2,4,5-TP (Silvex)	0.0022	U

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

Form I

# GC FL-PRO ORGANICS METHOD FL-PRO

## CASE NARRATIVE FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2112061

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
  - B. Sample Analysis: All holding times were met.

#### III. METHODS

Florida DEP/FL PRO

#### IV. PREPARATION

Soil samples were prepared by FL PRO for semi-volatiles analysis.

#### V. ANALYSIS

#### A. Calibration:

All calibration criteria were met.

#### B. Blanks:

All blank criteria were met.

#### C. Surrogates:

All surrogate criteria were met.

#### D. Spikes:

Laboratory Control Spikes (LCS)

All LCS criteria were met.

Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

All MS/SD criteria were met.

#### E. Internal standards:

This method does not require the use of internal standards.

#### F. Samples:

Sample analysis proceeded normally. Project specific RLs were used per client request.

## CASE NARRATIVE FLORIDA PETROLEUM RANGE ORGANICS (FL PRO) SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2112061

\*

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED DATE: 01-17-0 &

### FL-PRO ORGANIC CROSS REFERENCE TABLE

Lab Name:	PEL Laboratories, Inc.	Contract: Whiting Fld		
Lab Code :	PEL Case No.	SAS No: SDG No.: 2112061		
	Method	FL-PRO		
	EPA Sample No	Lab Sample ID		
	01138DP01S2	211206101		
	0116DP01S5	211206102		
	01116DP01S2	211206103		

Sample Data

#### FL-PRO ORGANIC ANALYSIS DATA SHEET

	EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld 01138DP01S2
Lab Code : PEL Case No.	SAS No: SDG No.: 2112061
Matrix: SOIL	Lab Sample ID: 211206101 Lab File ID 61-1.D
Sample wt/vol: 25.07 Units: G	Date Received: 01/07/02
Concentrated Extract Volume: 2	Date Extracted: 01/09/02
Level:(low/med) LOW	Date Analyzed: 01/09/02 Time: 2120
PercentSolids: 91.5 decanted:	Dilution Factor: 1
Extraction: SONC	Station ID: 38,0-2ft Method: FL-PRO
GPC Cleanup : ( Y/N ) N pH:	
Column(1): RTX-5 ID: 0.53 (mi	n)
CONCENTRATION UNITS: MG/KG	
CAS NO. ANALYTE	RESULT Q
289290-40-0 TPH	13.1 U

Form I

#### 1 FL-PRO ORGANIC ANALYSIS DATA SHEFT

FL-PRO ORGANI	IC ANALYSIS DATA SHEET
Lab Name: PEL Laboratories, Inc.	EPA Sample No.  Contract: Whiting Fld 0116DP01S5
Lab Code : PEL Case No.	SAS No: SDG No.: 2112061
Matrix: SOIL	Lab Sample ID: 211206102 Lab File ID 61-2.D
Sample wt/vol: 25.09 Units: G	
Concentrated Extract Volume: 2	Date Extracted: 01/09/02
Level:(low/med) LOW	Date Analyzed: 01/09/02 Time: 2155
PercentSolids: 86 decanted:	Dilution Factor: 1
Extraction: SONC	Station ID: 6,0-5ft Method: FL-PRO
GPC Cleanup: (Y/N) N pH:	·
**************************************	(mm)
CONCENTRATION UNITS: MG/KG	
CAS NO. ANALYTE	RESULT Q
5289290-40-0 TPH	13.9 U

#### FL-PRO ORGANIC ANALYSIS DATA SHEET

	EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld 01116DP01S2
Lab Code : PEL Case No.	SAS No: SDG No.: 2112061
Matrix: SOIL	Lab Sample ID: 211206103 Lab File ID 61-3.D
Sample wt/vol: 25.13 Units: G	Date Received: 01/07/02
Concentrated Extract Volume: 2	Date Extracted: 01/09/02
Level:(low/med) LOW	Date Analyzed: 01/09/02 Time: 2228
PercentSolids: 85.2 decanted :	. Dilution Factor: 1
Extraction: SONC	Station ID: 16,0-2ft Method: FL-PRO
GPC Cleanup : (Y/N) N pH:	
Column(1): RTX-5 ID: 0.53 (n	nm)
CONCENTRATION UNITS: MG/KG	
CAS NO. ANALYTE	RESULT Q
289290-40-0 TPH	82.4

Form I

## METALS DATA PACKAGE TCLP

## CASE NARRATIVE TCLP Metals

PEL Lab Reference No./SDG: 2112061

Client: CH2M Hill

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody included with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA Method 6010B for metals and 7470 for mercury analysis. All methods performed according to EPA guidelines and PEL Laboratory's Standard Operating Procedures.

#### IV. PREPARATION

EPA Method 1311 for the TCLP leaching, 3010A for TCLP metals leachate. EPA Method 7470 for TCLP mercury leachate. Methods performed according to EPA guidelines and PEL Laboratory's Standard Operating Procedures.

#### V. ANALYSIS 01/10/02 (6010B), 01/11/02 (7470)

A. Calibration: All quality control criteria were met.

B. Blanks: All calibration and preparation blank quality control criteria

were mei.

C. Spikes: All percent recovery quality control criteria were met.

D. Duplicates: All percent difference quality control criteria were met.

E. Samples: All sample analysis proceeded normally.

F. ICP interference Check Samples: All percent recovery quality control criteria were met.

G. Laboratory Control Samples: All percent recovery quality control criteria were met.

H. Serial Dilution: All quality control criteria was met.

#### **CASE NARRATIVE TCLP Metals**

PEL Lab Reference No./SDG: 2112061

I. Post Digestion Spike: All percent recovery quality control criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

\_\_\_\_ DATE: 01/11/02

#### U.S. EPA - CLP COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name.	PEL Laboratories, inc	Cor	tract: Whiting Fld	•	
Lab Code :	PEL	Case No.	SDG N	lo.: 211206	1
SOW No.:	***************				
	EPA	Sample No	Lab Sample ID		
	01138	BDP01S2	211206101		
Ť	01161	OP01S5	211206102	••••••	
	01116	DP01S2	211206103	·····	
Were ICP in	nterelement correctio	ns applied?		Yes/No	Yes
	ackground correction	• •		Yes/No	Yes
	- were raw data gen				
аррис	cation of background	corrections?		Yes/No	No
Comment	s:				
			with the terms and conditions		
			eness, for other than the		
			∞ntained in this hardcopy data mitted on floppy diskette has b		
			nager's designee, as verified b		
the fo	ollowing signature		nagers designee, as vermed t	у	
Signature:	Yoson I ke	L Far	Name: Mark Gudnason		
Date: ນ	/19/02		Title: Metals Section Leader		

Sample Data

#### U.S. EPA - CLP

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#### INORGANIC ANALYSIS DATA SHEET

		EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	01138DP01S2
Lab Code : PEL Case No.	SAS No: SI	OG No.: 2112061
Matrix: SOIL	Lab Sample ID: 211206101	*****
Level:(low/med) LOW	Date Received: 1/7/2002	
PercentSolids: 0		

### CONCENTRATION UNITS: MG/L TCLP Analysis

CAS NO.	ANALYTE	Concentration	С	Q	м
7440-38-2	Arsenic	0.05	U		Р
7440-39-3	Barium	0.6	J		Р
7440-43-9	Cadmium	0.2	U		Р
7440-47-3	Chromium	0.5	U		Р
7439-92-1	Lead	0.5	U		Р
7439-97-6	Mercury	0.005	U		cv
7782-49-2	Selenium	0.1	U		Р
7440-22-4	Silver	0.2	U		Р

Color Before:	Clarity Before:	Texture :
Color After :	Clarity After:	Artifacts:
Comments:		
20102 1942		

#### U.S. EPA - CLP

1

#### INORGANIC ANALYSIS DATA SHEET

		EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	0116DP01S5
Lab Code : PEL Case No.	SAS No: SI	OG No.: 2112061
Matrix: SOIL	Lab Sample ID: 211206102	
Level:(low/med) LOW	Date Received: 1/7/2002	
PercentSolids: 0		

CONCENTRATION UNITS: MG/L

#### **TCLP Analysis**

CAS NO.	ANALYTE	Concentration	С	Q	м
7440-38-2	Arsenic	0.05	U		Р
7440-39-3	Barium	0.69	j		Р
7440-43-9	Cadmium	0.2	U		Р
7440-47-3	Chromium	0.5	U		Р
7439-92-1	Lead	0.5	U		Р
7439-97-6	Mercury	0.005	U		cv
7782-49-2	Selenium	0.1	U		Р
7440-22-4	Silver	0.2	U		Р

Color Before:	Clarity Before:	Texture :
Color After:	Clarity After:	Artifacts:
Comments:	·	
***************************************		

#### U.S. EPA - CLP

1

#### INORGANIC ANALYSIS DATA SHEET

	_	EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	01116DP01S2
Lab Code : PEL Case No.	SAS No: SE	OG No.: 2112061
Matrix: SOIL	Lab Sample ID: 211206103	
Level:(low/med) LOW	Date Received: 1/7/2002	
PercentSolids: 0		

### CONCENTRATION UNITS: MG/L TCLP Analysis

CAS NO.	ANALYTE	Concentration	С	Q	м
7440-38-2	Arsenic	0.05	U		Р
7440-39-3	Barium	3	J		Р
7440-43-9	Cadmium	0.12	J		Р
7440-47-3	Chromium	0.5	U		Р
7439-92-1	Lead	2.2			Р
7439-97-6	Mercury	0.005	U		CV
7782-49-2	Selenium	0.1	U	-	Р
7440-22-4	Silver	0.2	U		Р

Color Before:	Clarity Before:	Texture :
Color After:	Clarity After:	Artifacts:
Comments:		
180102 1842		

## Appendix D

Offsite Backfill Material Analytical Results



**Customer Name:** 

CH2MHILL

Date & Time Received:

3-5-02; 10:00 AM

**Date Reported:** 

3-18-02

**PEL Submission Number:** 

2202149

**Project:** 

Whiting Field (Site 6,16, & 38)

Samples:

The submission consisted of 2 samples with sample identification shown in the

attached data tables.

Tests:

The samples were analyzed for EPA method:

8260, 8270, 8081, 8082, 8151, FL PRO, 6010, 7471, and 9045

**Results:** 

See the attached data tables for results.

Distribution of Reports:

1-CH2MHILL

Attn: Tatiana Romanova Phone: (770) 604-9182

2-CH2MHILL

Attn: Amy Twitty Phone: (850) 939-8300

Respectfully Submitted.

Brian Spann

Laboratory Manager PEL Laboratories, Inc.

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. PEL letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualitities of apparently identical or similar materials.

## Cross-Reference sheet for SDG 2202149-Whiting Fld

	SDG	FieldID	SampleType	LabSampleID	SampleDescription
Whiting Fld	2202149	011FILLMAT01	N .	220214901	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01MS	MS	64780	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01MS	MS	64790	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01MS	MS	64865	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01MS	MS	64903	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01MS	MS	65045	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01SD	SD	64866	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01SD	SD	64904	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01SD	SD	64791	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01SD	SD	64781	011-FILLMAT-01
Whiting Fld	2202149	011FILLMAT01SD	SD	65046	011-FILLMAT-01
Whiting Fld	2202149	011TRIPB01	N	220214902	011-TRIPB-01
Whiting Fld	2202149	0306BLKA32	МВ	0306BLKA32	0306BLKA32
Whiting Fld	2202149	0306BLKA32MS	BS	0306BLKA32MS	0306BLKA32
Whiting Fld	2202149	0306BLKA32SD	BD	0306BLKA32SD	0306BLKA32
Whiting Fld	2202149	0306BLKS12	MB	0306BLKS12	0306BLKS12
Whiting Fld	2202149	0306BLKS12MS	BS	0306BLKS12MS	0306BLKS12
Whiting Fld	2202149	0306BLKS12SD	BD	0306BLKS12SD	0306BLKS12
Whiting Fld	2202149	0306LCSA31	BS	0306LCSA31	0306LCSA31
Whiting Fld	2202149	0306LCSS11	BS	0306LCSS11	0306LCSS11
Whiting Fld	2202149	06BLK	MB	64776	06BLK
Whiting Fld	2202149	06LCSS	BS	64777	06LCSS
Whiting Fld	2202149	08BLKS	МВ	64860	08BLKS
Whiting Fld	2202149	08LCSS	BS	64861	08LCSS
Whiting Fld	2202149	08ТОХ	BS	64862	08TOX
Whiting Fld	2202149	307SBLK	мв	64786	307SBLK

Page 1 of 2

	SDG	FieldID	SampleType	LabSampleID	SampleDescription
Whiting Fld	2202149	307SLCS	BS	64787	307SLCS
Whiting Fld	2202149	64901BLK	MB	64901	64901BLK
Whiting Fld	2202149	64902LCS	BS	64902	64902LCS
Whiting Fld	2202149	65043BLK	МВ	65043	65043BLK
Whiting Fld	2202149	65044LCS	BS	65044	65044LCS
Whiting Fld	2202149	A08BLK	МВ	64867	A08BLK
Whiting Fld	2202149	A08BLKMS	BS	64869	A08BLK
Whiting Fld	2202149	A08BLKSD	BD	64870	A08BLK
Whiting Fld	2202149	A08LCS	BS	64868	A08LCS
Whiting Fld	2202149	BLKS1	МВ	64800	BLKS1
Whiting Fld	2202149	BLKS1MS	BS	64802	BLKS1
Whiting Fld	2202149	BLKS1MSD	BD	64803	BLKS1
Whiting Fld	2202149	LCSS1	BS	64801	LCSS1

Monday, March 18, 2002

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# **Organics**

## **Organic Data Qualifiers**

- U Indicates the analyte was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that analyte. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when indicated.
- J Indicates estimated value. It is used when the data indicates the presence of an analyte above the method detection limit (MDL) yet lower than the reporting limit.
- B Indicates the analyte was found in the associated blank as well as in the sample. The notation indicates possible contamination of the sample.
- E indicates the value reported is above the highest calibration standard for that analyte. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result may be reported on another Form 1.
- D Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.
- C The "C" qualifier indicates the presence of this analyte has been confirmed by GC/MS analysis.
- P This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns. The lower of the two values is reported on Form 1 with a "P" qualifier.
- N This qualifier indicates presumptive evidence of an analyte. This qualifier is only used for tentatively identified compounds (TIC), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" qualifier is not used.
- A This qualifier indicates that a TIC is a suspected aldol-condensation product.
- X Data flagged as rejected by analyst utilizing analytical judgement.

## **Organic Sample ID Qualifiers**

The qualifiers that may be appended to the lab sample ID and/or the client sample ID for organic analysis are defined below:

- Dituted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of more than one diluted reanalysis may be reported.
- R Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

# GC/MS VOLATILE ORGANICS METHOD 8260

# CASE NARRATIVE GC/MS VOLATILE ORGANICS

#### PEL Lab Reference No./SDG: 2202149

#### Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA 8260B/SW846

#### IV. PREPARATION

Water samples were prepared by SW846/5030 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

Soil samples were prepared by SW846/5035 for EPA8260B volatiles analysis. All aspects of sample preparation proceeded without exception.

#### V. ANALYSIS

#### A. Calibration:

All acceptance criteria were met.

#### B. Blanks:

Blank 0306BLKS12 analyzed with the soil samples had 2-Hexanone above the MDL but below the RL. No further action is necessary. All associated samples received the appropriate qualifier. The blank analyzed with the water samples met the criteria.

#### C. Surrogates:

All surrogate criteria were met.

# CASE NARRATIVE GC/MS VOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

#### D. Spikes:

#### **Laboratory Control Samples (LCS)**

In the analytical batch M3030602a, Methylene Chloride was above the acceptance criteria for percent recovery. No further action was necessary; these results are within the PEL 10% limits. In the analytical batch M1030602, 1,1,2,2-Tetrachloroethane was above the acceptance criteria for percent recovery. No further action was necessary; these results are within the PEL 10% limits.

#### Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

The client did not specify an MS/SD set to be analyzed. Reagent water spikes were analyzed as an MS/SD where Methylene Chloride and 2-Butanone were above the acceptance criteria for percent recovery in the MS sample, and 2-Butanone was above the acceptance criteria for percent recovery in the SD sample. Chloroethane and Methylene Chloride did not meet the acceptance criteria for Relative Percent Difference. These results are within the PEL 10% limits. No further action was taken. Reagent sand spikes were analyzed as an MS/SD where all criteria were met.

#### E. Internal standards:

All internal standard criteria were met.

#### F. Samples:

Sample analysis proceeded normally. Client specific reporting limits were used.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

SIGNED: 15-02

## **VOLATILE ORGANIC CROSS REFERENCE TABLE**

Lab Name:	PEL Labo	oratories, Inc.	Contract:	Whiting Fld	
Lab Code:	PEL	Case No.	SAS No:	SDG No.:	2202149
4		Method:	8260	•	
		EPA Sample No		Lab Sample ID	
		011FILLMAT01		220214901	
		011TRIPB01		220214902	····

Sample Data

		EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	011FILLMAT01
Lab Code : PEL Case No.	SAS No:	SDG No.: 2202149
Matrix: SOIL	Lab Sample ID: 220214901	Lab File ID: 149015D
Sample wt/vol: 5.04 Units: G	Date Received: 03/05/02	
Concentrated Extract Volume: 5	Date Extracted:	
Level:(low/med) LOW	Date Analyzed: 03/06/02	Time: 1114
PercentSolids: 90.8 decanted :	Dilution Factor: 1	
Extraction: PURGETRAP	Station ID: Clean Fill Mat.	Method: 8260
GPC Cleanup : ( Y/N ) pH:	-	
Column(1): DB-624 ID: 0.18 (mm	<u>)</u>	
CONCENTRATION UNITS: UG/KG		

CAS NO.	ANALYTE	RESULT	Q
74-87-3	Chloromethane	2.2	Ų
75-01-4	Vinyl chloride	2.2	U
74-83-9	Bromomethane	2.2	υ
75-00-3	Chloroethane	2.2	U
75-35-4	1,1-Dichloroethene	2.2	U
75-15-0	Carbon disulfide	2.2	U
75-09-2	Methylene chloride	2.2	U
156-60-5	trans-1,2-Dichloroethene	2.2	υ
75-34-3	1,1-Dichloroethane	2.2	U
67-64-1	Acetone	4.9	U
156-59-2	cis-1,2-Dichloroethene	2.2	U
78-93-3	2-Butanone	4.4	U
67-66-3	Chloroform	2.2	U
71-55-6	1,1,1-Trichloroethane	2.2	U
56-23-5	Carbon tetrachloride	2.2	U
71-43-2	Benzene	2.2	U
107-06-2	1,2-Dichloroethane	2.2	U
79-01-6	Trichloroethene	2.2	υ
108-05-4	Vinyl acetate	2.2	U
78-87-5	1,2-Dichloropropane	2.2	υ
75-27-4	Bromodichloromethane	2.2	U
10061-01-5	cis-1,3-Dichloropropene	2.2	U
108-10-1	4-Methyl-2-pentanone	4.4	U
108-88-3	Toluene	2.2	U
10061-02-6	trans-1,3-Dichloropropene	2.2	U
79-00-5	1,1,2-Trichloroethane	2.2	U
127-18-4	Tetrachioroethene	2.2	U

Form I

EPA Sample No. 011FILLMAT01 Contract: Whiting Fld Lab Name: PEL Laboratories, Inc. Lab Code: PEL SAS No: SDG No.: 2202149 Case No. Lab Sample ID: 220214901 Lab File ID: 14901R.D Matrix: SOIL Sample wt/vol: 5.04 Units: G Date Received: 03/05/02 Concentrated Extract Volume: 5 Date Extracted: Level:(low/med) LOW Date Analyzed: 03/06/02 Time: 1114 \_\_\_\_decanted : \_\_\_\_\_\_ Dilution Factor: 1 PercentSolids: 90.8 Extraction: PURGETRAP Station ID: Clean Fill Mat. Method: 8260 GPC Cleanup : ( Y/N ) \_\_\_\_ pH: Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	ANALYTE	RESULT	Q
142-28-9	1,3-Dichloropropane	2.2	U
591-78-6	2-Hexanone	4.4	U
124-48-1	Dibromochloromethane	2.2	U
108-90-7	Chlorobenzene	2.2	U
100-41-4	Edigibenzene	2.2	U
511-39-00	p,m-Xylene	4.4	υ
95-47-6	o-Xylene	2.2	U
100-42-5	Styrene	2.2	υ
75-25-2	Bromoform	2.2	U
79-34-5	1,1,2,2-Tetrachloroethane	2.2	U
540-59-0	1,2-Dichloroethene (total)	4.4	U
1330-20-7	Xylene (total)	6.6	U
100-44-7	Benzyl chloride	2.2	U

Form I

EPA Sample No. 011TRIPB01 Contract: Whiting Fld Lab Name: PEL Laboratories, Inc. SAS No: SDG No.: 2202149 Lab Code: PEL Case No. Lab Sample ID: 220214902 Lab File ID: 14902.D Matrix: WATER Sample wt/vol: 5 Units: ML Date Received: 03/05/02 Concentrated Extract Volume: 5 Date Extracted: Level:(low/med) LOW Date Analyzed: 03/06/02 Time: 1547 decanted: \_\_\_\_\_ Dilution Factor: 1 PercentSolids: Extraction: PURGETRAP 8260 Station ID: Trip Blank Method: GPC Cleanup : (Y/N) \_\_\_\_\_ pH: ID: 0.18 Column(1): DB-624 (mm)

CONCENTRATION UNITS: UG/L

CAS NO.	ANALYTE	RESULT	Q
74-87-3	Chloromethane	1	U
75-01-4	Vinyl chloride	1	U
74-83-9	Bromomethane	1	U
75-00-3	Chloroethane	1	U
75-35-4	1,1-Dichloroethene	1	U
75-15-0	Carbon disulfide	1	U
75-09-2	Methylene chloride	1	U
156-60-5	trans-1,2-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
67-64-1	Acetone	4	U
156-59-2	cis-1,2-Dichloroethene	1	υ
78-93-3	2-Butanone	2.1	U
67-66-3	Chloroform	1	υ
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
108-05-4	Vinyl acetate	1	υ
78-87-5	1,2-Dichloropropane	1	υ
75-27-4	Bromodichloromethane	1	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-10-1	4-Methyl-2-pentanone	2	U
108-88-3	Toluene	1	U
10061-02-6	trans-1,3-Dichloropropene	1	U
79-00-5	1,1,2-Trichloroethane	1	U
127-18-4	Tetrachloroethene	1	U

Form I

		EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	011TRIPB01
Lab Code : PEL Case No.	SAS No:	SDG No.: 2202149
Matrix: WATER	Lab Sample ID: 220214902	Lab File (D: 14902.D
Sample wt/vol: 5 Units: ML	Date Received: 03/05/02	
Concentrated Extract Volume: 5	Date Extracted:	
Level:(low/med) LOW	Date Analyzed: 03/06/02	Time: <u>1547</u>
PercentSolids: 0 decanted:	Dilution Factor: 1	
Extraction: PURGETRAP	Station ID: Trip Blank	Method: 8260
GPC Cleanup : ( Y/N ) pH:	_	
Column(1): <u>DB-624</u> ID: 0.18 <u>(material line)</u>	<u>m)</u>	
CONCENTRATION UNITS: UG/L		
CAS NO. ANALYTE	RESULT G	)

CAS NO.	ANALYTE	RESULT	Q
142-28-9	1,3-Dichloropropane	1	υ
591-78-6	2-Hexanone	2	U
124-48-1	Dibromochloromethane	1	U
108-90-7	Chlorobenzene	1	U
100-41-4	Ethylbenzene	1	υ
511-39-00	p,m-Xylene	2	IJ
95-47-6	o-Xylene	1	U
100-42-5	Styrene	1	υ
75-25-2	Bromoform	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1	U
540-59-0	1,2-Dichloroethene (total)	1	U
1330-20-7	Xylene (total)	3	U
100-44-7	Benzyl chloride	1	U

Form I

# GC/MS SEMI-VOLATILE ORGANICS METHOD 8270

# CASE NARRATIVE GC/MS SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA SW846 8270

#### IV. PREPARATION

Samples were prepared by EPA SW846 3545 for 8270 semi-volatiles analysis.

#### V. ANALYSIS

#### A. Calibration:

All acceptance criteria were met.

#### B. Blanks:

All acceptance criteria were met.

#### C. Surrogates:

All acceptance criteria were met.

#### D. Spikes:

#### Laboratory Control Spikes (LCS)

All acceptance criteria were met.

#### Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

Reagent MS/SD samples were analyzed, where all criteria were met with the exception of:

MS- Phenol was recovered above criteria at 80.6 % with criteria of (13-69%)

SD- Phenol was recovered above criteria at 78.8 % with criteria of (13-69%) No further action was taken.

#### E. Internal standards:

All acceptance criteria were met.

#### CASE NARRATIVE GC/MS SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

#### F. Samples:

Sample analysis proceeded normally. Specific RLs were used per client request. Please note that the Client was notified that the lowest point in the calibration curve is above the requested reporting limit for: N-Nitroso-di-n-propylamine (90ug/Kg), Benzo(a) pyrene (100 ug/Kg), and Dibenz(a,h)anthracene (100 ug/Kg).

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED: 3-13-07

### SEMI-VOLATILE ORGANIC CROSS REFERENCE TABLE

Lab Name:	PEL Laboratorie	s, Inc.	Contract:	Whiting Fld	
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2202149
		Method:	8270		4
		EPA Sample No		Lab Sample ID	
		011FILLMAT01		220214901	

Sample Data

. 1

		EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	011FILLMAT01
Lab Code : PEL Case No.	SAS No:	SDG No.: 2202149
Matrix: SOIL	Lab Sample ID: 220214	4901 Lab File ID: 149-01.D
Sample wt/vol: 15.17 Units: G	Date Received: 03/05	/02
Concentrated Extract Volume: 1	Date Extracted: 03/06	/02
Level:(low/med) LOW	Date Analyzed: 03/07/	/02 Time: 1453
PercentSolids: 90.8 decanted :	Dilution Factor: 1	
Extraction: OTHER	Station ID: Clean Fill M	fat. Method: 8270
GPC Cleanup : ( Y/N ) N pH:	•	
Column(1): HPMS-5 ID: 0.25 (mm	)_	

CONCENTRATION UNITS: UG/KG

CAS NO.	ANALYTE	RESULT	Q
111-44-4	Bis(2-Chloroethyl)ether	363	U
108-95-2	Phenoi	363	U
95-57-8	2-Chlorophenol	363	U
541-73-1	1,3-Dichlorobenzene	363	U
106-46-7	1,4-Dichlorobenzene	363	U
95-50-1	1,2-Dichlorobenzene	363	U
100-51-6	Benzyl alcohol	526	U
108-60-1	bis(2-Chloroisopropyl)ether	363	υ
95-48-7	2-Methylphenol (o-Cresol)	363	U
67-72-1	Hexachloroethane	363	U
621-64-7	N-Nitroso-di-n-propylamine	163	U
106-44-5	4-Methylphenol	363	U
98-95-3	Nitrobenzene	363	U
78-59-1	Isophorone	363	บ
88-75-5	2-Nitrophenol	363	U
105-67-9	2,4-Dimethylphenol	363	U
65-85-0	Benzoic acid	363	U
111-91-1	Bis(2-Chloroethoxy)methane	363	U
120-83-2	2,4-Dichlorophenol	363	U
120-82-1	1,2,4-Trichlorobenzene	363	U
91-20-3	Naphthalene	363	U
106-47-8	4-Chloroaniline	363	U
91-57-6	2-Methylnaphthalene	363	U
87-68-3	Hexachlorobutadiene	363	U
59-50-7	4-Chloro-3-methylphenol	363	U
90-12-0	1-Methylnaphthalene	363	U
77-47-4	Hexachlorocyclopentadiene	363	U

Form I



EPA Sample No. 011FILLMAT01 Contract: Whiting Fld Lab Name: PEL Laboratories, Inc. Lab Code: PEL Case No. SAS No: SDG No.: 2202149 Matrix: SOIL Lab Sample ID: 220214901 Lab File ID: 149-01.D Sample wt/vol: 15.17 Units: G Date Received: 03/05/02 Concentrated Extract Volume: Date Extracted: 03/06/02 Level:(low/med) LOW Date Analyzed: 03/07/02 Time: 1453 PercentSolids: 90.8 decanted : \_\_ Dilution Factor: 1 Extraction: OTHER Station ID: Clean Fill Mat. Method: 8270 GPC Cleanup: (Y/N) N pH:

Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	ANALYTE	RESULT	Q
88-06-2	2,4,6-Trichlorophenol	363	U
95-95-4	2,4,5-Trichlorophenol	363	U
91-58-7	2-Chloronaphthalene	363	U
88-74-4	2-Nitroaniline	363	U
208-96-8	Acenaphthylene	363	U
131-11-3	Dimethyl-phthalate	363	U
606-20-2	2,6-Dinitrotoluene	363	U
83-32-9	Acenaphthene	363	U
99-09-2	3-Nitroaniline	363	U
51-28-5	2,4-Dinitrophenol	726	U
132-64-9	Dibenzofuran	363	U
121-14-2	2,4-Dinitrotoluene	363	U
100-02-7	4-Nitrophenol	726	U
86-73-7	Fluorene	363	U
7005-72-3	4-Chlorophenyl-phenylether	363	U
84-66-2	Diethylphthalate	363	U
100-01-6	4-Nitroaniline	363	U
534-52-1	2-Methyl-4,6-dinitrophenol	726	U
86-30-6	N-Nitrosodiphenylamine	363	U
101-55-3	4-Bromophenyl-phenylether	363	U
118-74-1	Hexachlorobenzene	363	U
87-86-5	Pentachlorophenol	363	U
85-01-8	Phenanthrene	363	U
120-12-7	Anthracene	363	U
84-74-2	Di-n-butylphthalate	363	U
206-44-0	Fluoranthene	363	U
129-00-0	Pyrene	363	U

Form I

EPA Sample No. 011FILLMAT01 Lab Name: PEL Laboratories, Inc. Contract: Whiting Fld SAS No: SDG No.: 2202149 Lab Code: PEL Case No. Matrix: SOIL <sub>y</sub>Lab Sample ID: 220214901 Lab File iD: 149-01.D Sample wt/vol: 15.17 Units: G Date Received: 03/05/02 Concentrated Extract Volume: 1 Date Extracted: 03/06/02 Level:(low/med) LOW Date Analyzed: 03/07/02 Time: 1453 PercentSolids: decanted : 90.8 \_ Dilution Factor: 1 Extraction: OTHER Station ID: Clean Fill Mat. 8270 Method: GPC Cleanup: (Y/N) N pH: Column(1): HPMS-5 ID: 0.25 (mm)

CONCENTRATION UNITS: UG/KG

CAS NO.	ANALYTE	RESULT	Q
85-68-7	Butylbenzylphthalate	363	U
91-94-1	3,3'-Dichlorobenzidine	363	U
56-55-3	Benzo(a)anthracene	363	U
218-01-9	Chrysene	363	υ
117-81-7	bis(2-ethythexyl)phthalate	363	الدور
117-84-0	Di-n-octylphthalate	363	U
205-99-2	Benzo(b)fluoranthene	· <b>363</b>	U
207-08-9	Benzo(k)fluoranthene	363	U
50-32-8	Benzo(a)pyrene	182	U
193-39-5	Indeno(1,2,3-cd)pyrene	363	U
53-70-3	Dibenz(a,h)anthracene	182	U
191-24-2	Benzo(g,h,i)perylene	363	U
86-74-8	Carbazole	363	U

Form I

# GC/ECD PESTICIDE ORGANICS METHOD 8081

# CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA SW846 8081

#### IV. PREPARATION

Soil samples were prepared by EPA SW846 3550 for 8081 semi-volatiles analysis.

#### V. ANALYSIS

#### A. Calibration:

All calibration criteria were met.

#### B. Blanks:

All blank criteria were met.

#### C. Surrogates:

All surrogate criteria were met.

#### D. Spikes:

#### Laboratory Control Spikes (LCS)

There was one LCS analyzed with the soil samples where Alpha-BHC exceeded acceptable criteria.

#### Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

There was one MS/SD set analyzed with the soil samples, on sample 011FILLMAT01, where all criteria were met for relative percent difference, however Alpha-BHC exceeded acceptable criteria in the MS and SD samples for percent recovery. Since all surrogate and internal standard criteria were met, and since the compound exceeded recovery no further action was taken.

#### E. Internal standards:

All internal standard criteria were met.

PEL Lab Reference No./SDG: 2202149

#### F. Samples:

Sample analysis proceeded normally. Data was collected using dual column analysis. Please note that the higher value of the two columns is reported, unless the %D between the two columns is >40%, in which case the lower of the two values is reported. Project specific RLs were used per client request. Soil samples are reported on a dry weight basis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED: Sufffam DATE: 3-14-02

### PESTICIDE ORGANIC CROSS REFERENCE TABLE

.ab Name:	PEL Laboratorie	s, Inc.	Contract:	Whiting Fld	
.ab Code :	PEL	Case No.	SAS No:	SDG No.:	2202149
		Method:	8081	·	4
		EPA Sample No		Lab Sample ID	
		011FILLMAT01		220214901	

Sample Data

### PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 011FILLMAT01 Contract: Whiting Fld Lab Name: PEL Laboratories, Inc. SAS No: SDG No.: 2202149 Lab Code: PEL Case No. Lab Sample ID: 220214901 Lab File ID: 14901.D SOIL Matrix: 03/05/02 Sample wt/vol: 33 Units: G Date Received: 03/08/02 Concentrated Extract Volume: Date Extracted: 10 Level:(low/med) LOW Date Analyzed: 03/12/02 Time: 1003 PercentSolids: 90.8 decanted: Dilution Factor: SONC Extraction: Station ID: Clean Fill Mat. Method: 8081 GPC Cleanup: (Y/N) pH: ID: 0.53 (mm) Column(2): RTX-1701 ID: 0.53 (mm) Column(1): XTI-5 CONCENTRATION UNITS: UG/KG RESULT Q CAS NO. **ANALYTE** U 319-84-6 alpha-BHC 1.6 υ 319-85-7 beta-BHC 1.6 U 1.6 319-86-8 delta-BHC 1.6 U 58-89-9 gamma-BHC (Lindane) U Heptachlor 1.6 76-44-8 309-00-2 Aldrin 1.6 U U 1.6 1024-57-3 Heptachlor epoxide U 1.6 959-98-8 Endosulfan I 1.6 U Dieldrin 60-57-1 U 72-55-9 4,4'-DDE 1.6 72-20-8 Endrin 1.6 U U 1.6 33213-65-9 Endosulfan II υ 72-54-8 4.4'-DDD 1.6 U 1.6 1031-07-8 Endosulfan sulfate U 50-29-3 4,4'-DDT 1.6 1.6 U 72-43-5 Methoxychlor

Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results i	S
reported	

1.6

1.6 1.6

1.6

91

7421-93-4

5103-71-9

5103-74-2

53494-70-5

8001-35-2

Endrin aldehyde

alpha-Chlordane

Endrin ketone

Toxaphene

gamma-Chlordane

U

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# GC/ECD PCB ORGANICS METHOD 8082

# CASE NARRATIVE POLYCHLORINATED BIPHENYLS (PCB) SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA SW846 8082

#### IV. PREPARATION

Soil samples were prepared by SW846 EPA 3550B for 8082 semi-volatiles analysis.

All aspects of sample preparation proceeded without exception.

#### V. ANALYSIS

#### A. Calibration:

All calibration criteria were met.

#### B. Blanks:

All blank criteria were met.

#### C. Surrogates:

All surrogate criteria were met.

#### D. Spikes:

PCB 1016 and PCB 1260 were used as the spiking solution for all QC spikes per the AFCEE QAPP 3.0.

#### Laboratory Control Spikes (LCS)

All LCS criteria were met.

Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

All spike criteria were met.

#### E. Internal standards:

This method does not require the use of internal standards.

# CASE NARRATIVE POLYCHLORINATED BIPHENYLS (PCB) SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

#### F. Samples:

Sample analysis proceeded normally. Data was collected using dual column analysis. Please note that the higher value of the two columns is reported, unless the %D between the two columns is >40%, in which case the lower of the two values is reported. Project specific RLs were used per client request. Soil samples are reported on a dry weight basis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED: DATE: 3/40Z

## PCB ORGANIC CROSS REFERENCE TABLE

.ab Name:	PEL Laboratories	s, Inc.	Contract:	Whiting Fld	
.ab Code :	PEL	Case No.	SAS No:	SDG No.:	2202149
		Method:	8082		
		EPA Sample No		Lab Sample ID	
		011FILLMAT01		220214901	_

Sample Data

## PCB ORGANIC ANALYSIS DATA SHEET

		EPA Sample No.	
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld	011FILLMAT01	
Lab Code : PEL Case No.	SAS No:	SDG No.: 2202149	
Matrix: SOIL	Lab Sample ID: 220214901	Lab File ID: A14901.D	
Sample wt/vol: 33 Units: G	Date Received: 03/05/02		
Concentrated Extract Volume: 10	Date Extracted: 03/08/02	· · · · · · · · · · · · · · · · · · ·	
Level:(low/med) LOW	Date Analyzed: 03/12/02	Time: 1557	
PercentSolids: 90.8 decanted:	Dilution Factor: 1		
Extraction: SONC	Station ID: Clean Fill Mat.	Method:8082	
GPC Cleanup : ( Y/N ) N pH:	·		
Column(1): XTI-5 ID: 0.53 (m	m)		
CONCENTRATION UNITS: LIGING			

CAS NO.	ANALYTE	RESULT	Q
12674-11-2	Aroclor-1016	16	U
11096-82-5	Arodor-1260	25	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	บ
12672-29-6	Aroclor-1248	36	U
11097-69-1	Arodor-1254	74	บ

Form I

# GC/ECD HERBICIDE ORGANICS METHOD 8151

# CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

Client: CH2MHILL

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this data package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

EPA SW846 8151

#### IV. PREPARATION

Soil samples were prepared by EPA SW846 3550 for 8151 semi-volatiles analysis.

#### V. ANALYSIS

#### A. Calibration:

All acceptance criteria were met.

#### B. Blanks:

There was one blank analyzed associated with the water samples that was non-detect for target analytes.

#### C. Surrogates:

All surrogate criteria were met.

#### D. Spikes:

#### Laboratory Control Spikes (LCS)

All LCS criteria were met.

Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

All spike criteria were met.

#### E. Internal standards:

All internal standard criteria were met.

# CASE NARRATIVE GC/ECD SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2202149

#### F. Samples:

Sample analysis proceeded normally. Data was collected using dual column analysis. Please note that the higher value of the two columns is reported, unless the %D between the two columns is >40%, in which case the lower of the two values is reported. Project specific RLs were used per client request. Soil samples are reported on a dry weight basis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

SIGNED DATE: 314-02

#### HERBICIDE ORGANIC CROSS REFERENCE TABLE

Lab Name:	PEL Labor	ratories, Inc.	Contract:	Whiting Fld	
Lab Code :	PEL	Case No.	SAS No:	SDG No.:	2202149
4		Method:	8151	<del>-,</del>	
		EPA Sample No		Lab Sample ID	
		011FILLMAT01		220214901	

Sample Data

## HERBICIDE ORGANIC ANALYSIS DATA SHEET

			EPA Sample No.
Lab Name: PEL L	aboratories, Inc.	Contract: Whiting Fld	011FILLMAT01
Lab Code: PEL	Case No.	SAS No:	SDG No.: 2202149
Matrix: SOIL		Lab Sample ID: 2202149	01 Lab File ID: 14901.D
Sample wt/vol: 33	.02 Units: G	Date Received: 03/05/02	
Concentrated Extract	Volume: 10	Date Extracted: 03/06/02	2
Level:(low/med) L	<u>ow</u>	Date Analyzed: 03/08/02	2 Time: 1028
PercentSolids: 9	0.8 decanted :	Dilution Factor: 1	
Extraction: SONO	<u> </u>	_ Station ID: Clean Fill Mar	. Method: 8151
GPC Cleanup : ( Y/N	) <u>N</u> pH:		
Column(1): XTI-5	ID: 0.53	(mm) Column(2): RTX-1701	ID: 0.53 (mm)
CONCENTRATION	UNITS: UGIKG		
CAS NO. AI	NALYTE	RESULT	Q
918-00-9 Dic	amba	8.4	U
5-99-0 Da	lapon	9	U
		4400	1.5

CAS NO.	ANALYTE	RESULT	Q
1918-00-9	Dicamba	8.4	U
75-99-0	Dalapon	9	U
93-65-2	MCPP	1100	U
94-74-6	MCPA	1530	JP
120-36-5	Dichloroprop	8.4	U
94-75-7	2,4'-D	8.4	υ
93-72-1	2,4,5-TP (Silvex)	8.4	U
93-76-5	2,4,5-T	8.4	U
94-82-6	2,4-DB	8.4	U
88-85-7	Dinoseb	8.4	U

180302 1630

Form I

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Higher value of the two columns reported as result unless %D between the columns is >40%, then the lower of the two results is reported

# Appendix E

**Site 16 Soil Confirmation Laboratory Analytical Results** 



**Customer Name:** 

**CH2MHILL** 

Date & Time Received:

5-14-02, 10:43 AM

Date Reported:

5-28-02

PEL Submission Number: 2204044

Project:

Whiting Field (Site 16)

Samples:

The submission consisted of 5 samples with sample identification shown in the

attached data tables.

Tests:

The samples were analyzed for EPA method:

Results:

See the attached data tables for results.

Distribution of Reports:

1-CH2MHILL

Attn: Tatiana Romanova Phone: (770) 604-9182

2-CH2MHILL

Attn: Amy Twitty Phone: (850) 939-8300

**Brian Spann** 

Laboratory Manager PEL Laboratories, Inc.

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. PEL letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualitities of apparently identical or similar materials.

# Cross-Reference sheet for SDG 2204044-Whiting Fld

_		SDG	FieldID	SampleType	LabSampleiD	SampleDescription
	Whiting Fld	2204044	01116CSS01	N	220404402	011-16-CS-S-01
	Whiting Fld	2204044	01116CSS02	N	220404403	011-16-CS-S-02
	Whiting Fld	2204044	01116CSS02MS	MS	220404404	011-16-CS-S-02
	Whiting Fld	2204044	01116CSS02SD	SD	220404405	011-16-CS-S-02
	Whiting Fld	2204044	16PREEBEB01	ЕВ	220404401	011-16-PREEB-EB-01
	Whiting Fld	2204044	514BLK	MB	69113	514BLK
	Whiting Fld	2204044	514BLKMS	BS	69115	514BLK
	Whiting Fld	2204044	514BLKSD	BD	69116	514BLK
	Whiting Fld	2204044	514LCS	BS	69114	514LCS
	Whiting Fld	2204044	523BLK	MB	69268	523BLK
	Whiting Fld	2204044	523LCS	BS	69269	523LCS

Tuesday, May 28, 2002

Organics  METHOD 8310 HPLC PAH ORGANICS  Sample Data  QC Summary  Standards Data	1 8 12 28
Chain of Custody Documentation	48
Addendum	52

**Organics** 

## **Organic Data Qualifiers**

- U Indicates the analyte was analyzed for but not detected. The number adjacent to the "U" qualifier indicates the reporting limit for that analyte. The reporting limit can vary from sample to sample depending on dilution factors or the percent moisture adjustment when indicated.
- J Indicates estimated value. It is used when the data indicates the presence of an analyte above the method detection limit (MDL) yet lower than the reporting limit.
- B Indicates the analyte was found in the associated blank as well as in the sample. The notation indicates possible contamination of the sample.
- E Indicates the value reported is above the highest calibration standard for that analyte. The sample should be analyzed at an appropriate dilution. "E" qualified values are estimations and the diluted result may be reported on another Form 1.
- D Indicates the analyte has been identified in a dilution reanalysis. "D" qualifiers are used for samples that have been analyzed at a lesser dilution than required for accurate quantitation.
- C The "C" qualifier indicates the presence of this analyte has been confirmed by GC/MS analysis.
- P This qualifier is used for pesticide / Aroclor target analytes where there is greater than 25% difference for the detected concentration between the two GC columns. The lower of the two values is reported on Form 1 with a "P" qualifier.
- N This qualifier indicates presumptive evidence of an analyte. This qualifier is only used for tentatively identified compounds (TIC), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the "N" qualifier is not used.
- A This qualifier indicates that a TIC is a suspected aldol-condensation product.
- X Data flagged as rejected by analyst utilizing analytical judgement.

200602 172

## **Organic Sample ID Qualifiers**

The qualifiers that may be appended to the lab sample ID and/or the client şample ID for organic analysis are defined below:

- DL Diluted reanalysis. Indicates that the results of the original analysis of the sample contained compounds that exceeded the calibration range. The sample was diluted and reanalyzed. May be followed by a digit to indicate multiple dilutions of the sample. The results of/more than one diluted reanalysis may be reported.
- R Reanalysis. The extract was reanalyzed without re-extraction. The "R" is not used if the sample was also re-extracted. May be followed by a digit to indicate multiple reanalysis of the sample at the same dilution.
- RE Re-extracted. The extract was reanalyzed with re-extraction. May be followed by a digit to indicate multiple re-extraction of the same sample at the same dilution.
- MS Matrix spike (may be followed by a digit to indicate multiple matrix within a sample set).
- SD Matrix spike duplicate (may be followed by a digit to indicate multiple matrix spike duplicate within a sample set).

# HPLC PAH ORGANICS METHOD 8310

# CASE NARRATIVE HPLC SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2204044

Client: CH2M Hill

#### I. RECEIPT

No exceptions were encountered unless a Sample Receipt Exception Report is attached to the Chain-of-Custody or a communication form is included in the addendum with this package.

#### II. HOLDING TIMES

- A. Sample Preparation: All holding times were met.
- B. Sample Analysis: All holding times were met.

#### III. METHODS

SW846/EPA 8310

#### IV. PREPARATION

Soil samples were prepared by SW846 EPA 3550 for 8310 semi-volatile analysis. Water samples were prepared by SW846 EPA 3510 for 8310 semi-volatile analysis.

#### V. ANALYSIS

#### A. Calibration:

All acceptance criteria were met.

#### B. Blanks:

All acceptance criteria were met with the exception of:
Blank 514BLK was analyzed with the water samples extracted on 05/14/02. The
following analyte(s) were detected above RL: Phenanthrene at 0.28 UG/L.
This blank was re-analyzed with similar results however only one analysis is included.
This analyte was not present in any of the samples associated with the blank. Therefore, no coding was required.

#### C. Surrogates:

All acceptance criteria were met.

#### D. Spikes:

#### 1. Laboratory Control Spikes (LCS)

All acceptance criteria were met.

# CASE NARRATIVE HPLC SEMIVOLATILE ORGANICS

PEL Lab Reference No./SDG: 2204044

Client: CH2M Hill

#### Spikes Continued:

#### 2. Matrix Spike/Matrix Spike Duplicate Samples (MS/SD)

A client requested MS/SD set was analyzed and a reagent MS/SD set was analyzed.

All percent recovery and relative percent difference(RPD) criteria were met with the exception of:

MS - 01116CSS02MS was analyzed with the soil samples extracted on 05/15/02. The following analyte(s) were recovered above criteria: Acenaphthene at 266.9 % with criteria of (43-89). The MS sample was re-analyzed with similar results, however only one analysis is reported. Matrix interference was confirmed by Mass Spectral analysis of the parent sample, which verified that no Acenaphtene was present. (MS data not included) Since the surrogate met criteria, and the analyte was above criteria, no further action was taken.

SD - 01116CSS02SD was analyzed with the soil samples extracted on 05/15/02. The following analyte(s) were recovered above criteria: Acenaphthene at 269 % with criteria of (43-89). The MSD sample was reanalyzed with similar results, however only one analysis is reported Matrix interference was confirmed by Mass Spectral analysis of the parent sample, which verified that no Acenapthene was present. (MS data not included) Since the surrogate met criteria, and the analyte was above criteria, no further action was taken.

#### E. Internal Standards:

This method does not require the use of internal standards.

#### F. Samples:

Sample analysis proceeded normally.

Project specific Reporting Limits were used per client request.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and PEL, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as, verified by the following signature.

SIGNED: 5-28-02

#### PAH ORGANIC CROSS REFERENCE TABLE

Lab Name:	PEL Laboratorio	es, Inc.	Contract;	Whiting Fld	***
Lab Code:	PEL	Case No.	SAS No:	SDG No.:	2204044
		Method:	8310		
		EPA Sample No		Lab Sample ID	
		16PREEBEB01		220404401	
		01116CSS01		220404402	<del></del>
		01116CSS02	<del></del>	220404403	<del></del>

Sample Data

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 16PREEBEB01 Lab Name: PEL Laboratories, Inc. Contract: Whiting Fld Lab Code: PEL Case No. SAS No: SDG No.: 2204044 Matrix: WATER Lab Sample ID: 220404401 Lab File ID: 44-1.D Units: 05/14/02 Sample wt/vol: 960 Date Received: ML Concentrated Extract Volume: Date Extracted: 05/14/02 Level:(low/med) LOW Date Analyzed: 05/15/02 0949 Time: decanted: PercentSolids: 0 Dilution Factor: 1 Extraction: SEPF Station ID: Pre Equipment R Method: 8310 GPC Cleanup: (Y/N) N pH: Column(1): Vydac 201TP54 ID: 4.6 (mm) CONCENTRATION UNITS: UG/L

CAS NO. **ANALYTE** RESULT Q 91-20-3 Naphthalene 0.21 U 208-96-8 Acenaphthylene 0.21 U 90-12-0 1-Methylnaphthalene 0.21 U 2-Methylnaphthalene 0.21 U 91-57-6 83-32-9 Acenaphthene 0.21 U 86-73-7 Fluorene 0.21 U 85-01-8 0.21 U Phenanthrene 120-12-7 Anthracene 0.21 U 206-44-0 Fluoranthene 0.21 U U 129-00-0 Pyrene 0.21 0.21 U 56-55-3 Benzo(a)anthracene U 218-01-9 Chrysene 0.21 205-99-2 Benzo(b)fluoranthene 0.21 U 207-08-9 Benzo(k)fluoranthene 0.21 U 50-32-8 Benzo(a)pyrene 0.21 U 53-70-3 Dibenz(a,h)anthracene 0.21 U 0.21 U 191-24-2 Benzo(g,h,i)perylene 193-39-5 Indeno(1,2,3-cd)pyrene 0.21

Form I

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## PAH ORGANIC ANALYSIS DATA SHEET

				E	:PA Sample No.
Lab Name:	PEL Laborato	ries, Inc.	Contract: Whiting F	Fid	01116CSS01
Lab Code:	PEL	Case No.	SAS No:	SDG No.: 2	2204044
Matrix: S	OIL		Lab Sample ID: 220	0404402 Lab f	File ID: 44-2.D
Sample wt/vo	l: <u>33.09</u>	Units: G	Date Received: 05	5/14/02	
Concentrated	Extract Volume	: <u>1</u>	Date Extracted: 05	5/15/02	
Level:(low/me	ed) <u>LOW</u>		Date Analyzed: 05	5/23/02 Tim	ne: <u>2317</u>
PercentSolids	s: <u>90.9</u>	decanted :	Dilution Factor: 1		
Extraction:	SONC		Station ID: Bottom	Confirm. Method:	8310
GPC Cleanur	p:(Y/N) <u>N</u>	pH:	_	e gd	
Column(1):	Vydac 201TP5	4 ID: 4.6 (mr	<u>n)</u>	<del>-</del>	
CONCENTR	ATION UNITS:	HGKG			<b>V</b>

CAS NO.	ANALYTE	RESULT	Q
91-20-3	Naphthalene	6.7	U
208-96-8	Acenaphthylene	6.7	U
90-12-0	1-Methylnaphthalene	6.7	U
91-57-6	2-Methylnaphthalene	6.7	U
83-32-9	Acenaphthene	6.7	U
86-73-7	Fluorene	6.7	υ
85-01-8	Phenanthrene	9.7	
120-12-7	Anthracene	6.7	U
206-44-0	Fluoranthene	40.4	
129-00-0	Pyrene	18.4	
56-55-3	Benzo(a)anthracene	17.9	
218-01-9	Chrysene	16.2	
205-99-2	Benzo(b)fluoranthene	18.3	
207-08-9	Benzo(k)fluoranthene	6.5	J
50-32-8	Benzo(a)pyrene	137	
53-70-3	Dibenz(a,h)anthracene	6.7	U
191-24-2	Benzo(g,h,i)perylene	22.1	
193-39-5	Indeno(1,2,3-cd)pyrene	15.1	

Form I

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 01116CSS02 Contract: Whiting Fld Lab Name: PEL Laboratories, Inc. Lab Code: PEL Case No. SAS No: SDG No.: 2204044 Matrix: SOIL Lab Sample ID: 220404403 Lab File ID: 44-3.D 33.09 Date Received: 05/14/02 Sample wt/vol: Units: G Concentrated Extract Volume: Date Extracted: 05/15/02 Level:(low/med) LOW Date Analyzed: 05/23/02 Time: 2351 PercentSolids: 92.7 decanted: Dilution Factor: 1 Extraction: SONC Station ID: Bottom Confirm. 8310 Method: GPC Cleanup : (Y/N) N pH: Column(1): Vydac 201TP54 ID: 4.6 (mm) CONCENTRATION UNITS: UG/KG

CAS NO.	ANALYTE	RESULT	Q
91-20-3	Naphthalene	6.6	U
208-96-8	Acenaphthylene	6.6	U
90-12-0	1-Methylnaphthalene	6.6	U
91-57-6	2-Methylnaphthalene	6.6	U
83-32-9	Acenaphthene	6.6	U
86-73-7	Fluorene	6.6	U
85-01-8	Phenanthrene	6.6	U
120-12-7	Anthracene	4	J
206-44-0	Fluoranthene	112	
129-00-0	Pyrene	86.1	
56-55-3	Benzo(a)anthracene	36.7	
218-01-9	Chrysene	43	
205-99-2	Benzo(b)fluoranthene	61.7	
207-08-9	Benzo(k)fluoranthene	27.3	
50-32-8	Benzo(a)pyrene	169	
53-70-3	Dibenz(a,h)anthracene	23.8	
191-24-2	Benzo(g,h,i)perylene	63.7	
193-39-5	Indeno(1,2,3-cd)pyrene	70.3	

Form 1

# **Chain of Custody Documentation**

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Constructors, Inc.			ر	H		)	ָ ר	101		20		2	1		151168-020510-01	0510-01	
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T PHASE/SITE/TASK:	* CTO OR DO NUMBER:	LAB PO NUMBER:	ER:			P. F.	K AND M	13 FAX AND MAIL REPORTS/EDER PRECIPIENT 2 (Name and Company)	12 PAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)			P. RECTI	IBNT 2 (Ad	dress, Tel No.	S RECIPIENT 2 (Address, Tel No. , and Fan No.):		Π
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# PEL LABS SAMPLE LOG IN SHEET

Project # 2204-044

Client	Inform	ation
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Client: CHam Hill	Date Rec'd: 5/14/02
Project: Whiting Field CTO-011	Due Date:
Log In Tech: WK	Rec'd via: Client Crosstown FedEx
Comments:	Other:

**Sample Verification** 

		YES	NO		YES	NO
Samples/Cooler Secure?		V		All Smples on COC Accounted For?	17	-
Samples Rec'd on Ice?		V		All Samples Rec'd Intact?	1	<u> </u>
Temperature WNL?		1	<b> </b>	Sample Vol. Suff. For Analysis?	1	<u> </u>
Temperature of Samples(°C)		40	<del>                                     </del>	Samples Rec'd W/I Hold Time?		
pH Verified?	NA			Are All Samples to be Analyzed?	-	<u> </u>
pH WNL?	NA			Correct Sample Containers?		<u></u>
Soil Origin Domestic?	<del>'</del>			Soil Origin Foreign?		-

## **COC** Verification

	YES	NO		YES	NO
Site Location/Project on COC?	1	<del>                                     </del>	Samplers Initials on COC?	17	<b>-</b>
Client Project # on COC?	1		Sample Time/Date Indicated?	17	
Project Mgr. Indicated on COC?	1		TAT requested: STD/RUSH	1	
COC Relinquished/Dated by Client?	1		Client Requests Verbal Results?		
COC Received/Dated by PEL?	V		Client Requests Faxed Results?		
			PEL to Conduct ALL Analyses?	1/	
			Specific Subcontract Indicated?		

Subcontracted Analysis

Subcontractor:	Subcontractor:	Subcontractor:
Due Date:	Due Daté:	Due Date:
Parameter:	Parameter:	Parameter:
Via: Crosstown FedEx	Via: Crosstown FedEx	Via: Crosstown FedEx
Tracking #:	Tracking #:	Tracking #:

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02-03	Ding William					
72-05	8310 (5)		HM	5-23-0	12:15	
	87/0(5)	SAC	1	5/23/02	17:00	
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# **Addendum**

## Sample Acknowledgement

**Customer Name:** 

CH2MHILL

Date & Time Received:

5-14-02, 10:43 AM

Date to be Reported:

5-28-02

Laboratory Submission Number/SDG:

2204044

Project:

Whiting Field (Site 16)

Samples:

The submission consisted of 5 samples with sample identification shown in the

attached data tables.

Tests:

The samples will be analyzed for EPA methods:

8310.

Sample Custody/COC discrepancies:

None.

Notes:

Due to the number of characters in the sample identifier, PEL has truncated the

ID's.

Distribution of Report to:

1-CH2MHILL

Attn: Amy Twitty

Phone: (850) 939-8300

2-CH2MHILL

Attn: Tatiana Romanova

Phone: (770) 604-9182

Respectfully Submitted,

PEL Laboratories, Inc.

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. PEL letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar materials.

Log-in Report Level: 3

Tog-m vehour				20101
Total of: 9	analyses on 5	samples (including (	<b>2</b> C)	14-May-02
Report/SD	G#: <b>2204044</b>			
SampleID	LAB ID	StationID Mat	rix SampleDate	ReceiveDate
16PREEBEB01	220404401	Pre Equipment R W	Q 5/10/02 12:00:00 PI	M 5/14/02 10:43:00 AM
Method 8310	PAH		8310	
SampleID	LAB ID	StationID Ma	trix SampleDate	ReceiveDate
01116CSS01	220404402	Bottom Confirm.	5/10/02 12:20:00 PI	M 5/14/02 10:43:00 AM
Method 8310	PAH		8310	
Dry Weight	Dry Weight		٠ چا	
SampleID	LAB ID	StationID Ma	trix SampleDate	ReceiveDate
01116CSS02	220404403	Bottom Confirm.	S 5/10/02 12:25:00 P	M 5/14/02 10:43:00 AM
Method				
8310	PAH		8310	
Dry Weight	Dry Weight			
SampleID	LAB ID	StationID Ma	trix SampleDate	ReceiveDate
01116CSS02MS	220404404	Bottom Confirm. S	Q 5/10/02 12:25:00 P	M 5/14/02 10:43:00 AM
Method 8310	PAH		8310	
Dry Weight			•	
SampleID	LAB ID	StationID Ma	trix SampleDate	ReceiveDate
01116CSS02SD	220404405	Bottom Confirm.	SQ 5/10/02 12:25:00 P	M 5/14/02 10:43:00 AM
Method 8310	PAH		8310	
Dry Weight	Dry Weight			

CH2MHILL Constructors, free	115 Padmeter Canter Place, Suits 700 Abunta, GA 20346-1278 Tal Nex (779) 604-6162 Par Nex (779) 604-6382		CH/	13	O	F-C	CHAIN-OF-CUSTODY RECORD	OD	YR	E C	S	7	(	'сосмин, 151168-020510-01	510-01
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Whiting Fleld	151168	PEL Laboratories, 4420 Rd., Tampa, FL 33619	PEL Laboratories, 4420 Pendola Point Rd., Tampa, FL 33619	ndola P		Amy Tv	Amy Twitty, CH2M Hill, Inc.	M Hill, Is	JC.		1766 (fax)	Sea L. 850-93	1766 Sen Lark Lane, Nav (fax) 850-939-0035	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300. (fax) 850-939-0035	850-939-8300,
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Twitty	850-939-8300 ext. 17	(813) 247-2805	2			fatiana Till Con	Tatiana Romanov & Bonny Hogue, CH2M Hill Constructors Inc.	& Bonny Inc.	. Hogue,	CH2M	115 Pbo	Perime ne-770	ter Center Pla -604-9182: Fax	115 Perimeter Center Place, NE, Sulte 700, Atlants, Ga. 30346 Phone-770-604-918:: Fax-770.604.9181	la, Ga. 30346
							25 ANALYS	25 ANALYSES REQUIRED (Include Method Numbers)	ED (Includ	Method N	imbers)				
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011-16-PREEB-EB-01	Pre Equipment Rinsate Blank	W 05/10/02	02 1200	၁	3								EB	1 Amber Liter	0
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011-16-CS-S-02-MS	128	S 05/10/02	222) 202	C	2	-							MS	1 - 802. glass	70
011-16-CS-S-01-MSD	Site 16 Bottom Confirm. Sample #2 MSD 21-31	S 05/10/02	5221 20	၁	7	-					-		SD	1 - 802. glass	0 0
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# - PEL LABS SAMPLE LOG IN SHEET

Project # 2204-044

## **Client Information**

Client: CHAM Hill	Date Rec'd: 5/14/02
Project: Whiting Field CTO-011	Due Date:
Log In Tech: ZMK	Rec'd via: Client Crosstown FedEx
Comments:	Other:

Sample Verification

		YES	NO		YES	NO
Samples/Cooler Secure?		V		All Smples on COC Accounted For?	V	
Samples Rec'd on Ice?		V		All Samples Rec'd Intact?	V	
Temperature WNL?		1		Sample Vol. Suff. For Analysis?	1	
Temperature of Samples(°C)		40		Samples Rec'd W/I Hold Time?	1	
pH Verified?	WA			Are All Samples to be Analyzed?		<del> </del>
pH WNL?	NA			Correct Sample Containers?		
Soil Origin Domestic?	•	1/		Soil Origin Foreign?	1	v

## **COC** Verification

	YES	NO		YES	NO
Site Location/Project on COC?	1		Samplers Initials on COC?	1	
Client Project # on COC?	1		Sample Time/Date Indicated?	1	
Project Mgr. Indicated on COC?	1		TAT requested: STD/RUSH		
COC Relinquished/Dated by Client?	1		Client Requests Verbal Results?		
COC Received/Dated by PEL?	1	<u> </u>	Client Requests Faxed Results?		
			PEL to Conduct ALL Analyses?		
		<b> </b>	Specific Subcontract Indicated?		-

**Subcontracted Analysis** 

Subcontractor:	Subcontractor:	Subcontractor:
Due Date:	Due Date:	Due Date:
Parameter:	Parameter:	Parameter:
Via: Crosstown FedEx	Via: Crosstown FedEx	Via: Crosstown FedEx
Tracking #:	Tracking #:	Tracking #:

# Appendix F

**Data Quality Evaluation** 



981001

July 3, 2002

Christelle Newsome CH2M HILL Constructors, Inc. 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346-1278

Subject: Data Validation Services for the NWS Whiting Field Site, Florida. Remedial Action Contract, SoDiv; Contract No. N62467-98-D-0995. CTO #0011.

Dear Ms. Newsome,

Enclosed please find the data validation package for soil and water analyses, CTO #00 – NWS Whiting Field Site, Florida. A copy of the validated database file in comma-delimited variable (csv) file format has been emailed to your attention. Three additional fields were added for the validated results, validated qualifiers, and qualifier codes.

This report addresses three sample deliver groups (SDG) for the Whiting Field sampling effort. The SDGs are F11289, F12178, and F13055, which include data from Accutest work order numbers F11289, F11298, F11333, F12178, F12221, F13055, F13066 and PEL work order number 2204044. Mr. Chris Ohland, a senior data validator, conducted the data validation effort.

Please call me at (414) 475-5503 if you have any questions or need additional information.

AM. Ohla

Sincerely,

**Christopher Ohland** 

Senior Environmental Chemist

Enclosures CMO/jo

edata:020703LTR.doc

# **Data Validation Reference Package**

# **Acronyms and Abbreviations**

CCI CH2MHILL Constructors, Inc.

COC Chain-of-Custody

CTO Contract Task Order

%D Percent Difference

DUP Duplicate

EDD Electronic Data Deliverable

GC Gas Chromatography

GS/MS Gas Chromatography/Mass Spectroscopy

IDL Instrument Detection Limit

IS Internal Standard

LCS Laboratory Control Sample

MDL Method Detection Limit

MS Matrix Spike

MSD Matrix Spike Duplicate

NFG Nation Functional Guidelines

%REC Percent Recovery

QA Quality Assurance

QC Quality Control

RL Reporting Limits

RPD Relative Percent Difference

RSD Relative Standard Deviation

SDG Sample Delivery Group

TPH Total Petroleum Hydrocarbons

USEPA United States Environmental Protection Agency

VOC Volatile Organic Compound

# **Data Qualifier Reference Table**

Final validated data were assigned qualifiers per USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (NFG). Table 1 presents all data qualifiers used in data validation for the NWS Whiting Field Florida -CTO#0011.

TABLE 1 EXAMPLE DATA QUALIFIER REFERENCE (CTO#0011-NWS Whiting Field)

Qualifier	Inorganic	Organic
=	The parameter was detected at the reported concentration.	The parameter was detected at the reported concentration.
U	The parameter was analyzed for, but was not detected at a concentration greater than the laboratory report limit. For metals the IDL is used.	The parameter was analyzed for, but was not detected at a concentration greater than the laboratory reporting limit.
J	The analyte was qualitatively identified and reported as an estimated concentration.	The analyte was qualitatively identified and reported as an estimated concentration.
	The concentration is an estimate because the measurement is less than the laboratory reporting limit or presumed biased because the analysis is associated with quality control samples exhibiting a bias.	The concentration is an estimate because the measurement is less than the laboratory reporting limit or presumed biased because the analysis is associated with quality control samples exhibiting a bias.

# **Qualification Code Reference Table**

Qualification codes explain why data qualifiers have been applied and identify possible limitations of data use. Table 2 presents all data qualifier codes used in data validation for the NWS Whiting Field Florida -CTO#0011.

TABLE 2
EXAMPLE DATA QUALIFIER CODE REFERENCE (CTO#0011-NWS Whiting Field)

Code	Inorganic	Organic
<	Concentration measurement is less than the laboratory limit of reporting, but greater than the method detection limit.	Concentration measurement is less than the laboratory limit of reporting, but greater than the method detection limit.
В	The B data qualifier was not used with this data set.	Parameter detected in the associated laboratory method or preparation blank. Presumed contamination.
E	The E data qualifier was not used with this data set.	The concentration value exceeds the upper limit of calibration for the applicable method.
М	The M data qualifier was not used with this data set.	Parameter is associated with a matrix spike or matrix spike duplicate sample that recovered outside the laboratory control limits.
Р	The P data qualifier was not used with this data set.	Parameter is associated with a field or laboratory duplicate precision result that is outside the laboratory control limits.

# **Data Validation Report**

## Introduction

The Navy issued a task order to CH2M HILL Constructors, Inc. (CCI) to conduct soil sampling activities at the Whiting Field Site under Navy Remedial Action Contract, SoDiv; Contract No. N62467-98-D-0995. CTO #0011. This report describes the data validation services provided by E-Data Inc., in support of CCI project number 151168.

CCI collected soil and aqueous field quality control samples on three separate events. The first event occurred between October 22, 2001 and November 6, 2001. The second event occurred between January 30, 2002 and February 12, 2002. The last event occurred between April 29, 2002 and May 15, 2002. Samples were taken at 47 unique sampling locations. Field quality control samples include 4 field duplicate, 17 equipment rinsate, and 6 trip blank samples. The laboratory prepared project-specific samples for MS/MSD pair analyses where applicable for all organic and wet chemistry analyses.

A summary of the samples and required analyses is shown in Table 3.

Samples were submitted to either Accutest Laboratory located in Orlando, Florida or PEL located in Tampa, Florida. Analyses for total organic carbon were transferred to the Accutest facility located in New Jersey.

Laboratory data were validated using CCI-approved checklists based on the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. A copy of the laboratory reports with data qualifiers applied during the data validation and chain-of-custody forms are provided in Appendix A. Appendix B contains copies of the completed data validation checklists.

Approximately 76 percent of the sample results (100 percent of the soil results) from the final validated-laboratory reports were compared to the electronic data deliverable (EDD). Table C-1 (Appendix C) summarizes the 1212 sample results that were verified. The database contains 1600 results from regular, field duplicate, equipment blank, and trip blank samples. E-Data reports the following issues identified during the review of the EDD.

- The EDD [LabQualifier] field contained "=J" as an entry. These entries were updated to "J"
- The EDD contained data records for the VOC parameter name MTBE, which was not a required analyte. These records have been deleted from the EDD.
- The [AnalysisMethod] was null for some of the records associated with the wet chemistry parameter name Total Organic Carbon. The empty field was updated to SW9060.
- The [QAQCType] field is not updated with the correct type for field duplicate, equipment rinse blank, and trip blank samples. This field was not updated by E-Data.

• The [Analyte] field has a spelling error for Dibenzo(a,h)anthracene. The correct spelling is Dibenz(a,h)anthracene. The EDD entries were corrected.

This report addresses three sample deliver groups (SDG) for the Whiting Field sampling effort. The SDGs are F11289, F12178, and F13055, which include data from Accutest work order numbers F11289, F11298, F11333, F12178, F12221, F13055, F13066 and PEL work order number 2204044. Mr. Chris Ohland, a senior data validator, conducted the data validation effort.

## **Data Validation Findings Summary**

This section presents a summary of the data validation findings of the data reviewer.

#### **Volatile Organic Analyses**

The number and type of deficiencies that were discovered and documented during the data validation of volatile organic analyses was minimal.

Poor field precision between duplicate samples F11289-4/-5 and F13055-14/-17 was observed for ethylbenzene and xylene. The results of the primary sample and its duplicate are qualified as estimated and flagged "J."

The MS/MSD recoveries for ethylbenzene and xylene were below the lower control limit. The presence of these parameters in the primary sample may have interfered with the analyses. The results of the primary sample have been qualified as estimated and flagged "J" for ethylbenzene and xylene.

COC No. 151168-020205-01 and 151168-020205-02 are not properly relinquished by the field team.

#### **PAH Analyses**

Second column confirmation was not performed as specified in the laboratory statement of work. Instead, the laboratory performed confirmation by spectrum match using a diode array detector at two different wavelengths.

Quantifications were calculated from the primary detector response, unless in the analyst judgment the measurement was biased. Higher concentrations may be measured and reported from the secondary detector response if a more conservative concentration is required.

The laboratory sample receipt form indicates that sample 011-04-POSTEB-W-01-03 was listed twice and that the bottles were labeled at 16:30 and 17:35. There is no notice that CCI was notified and that the discrepancy was resolved.

MS/MSD analyses performed on PEL sample ID 2204044-02 found in SDG# 2204044 were above the upper recovery control limits for acenaphthene. No action was taken to qualify the sample results because acenaphthene was not detected in any of the associated samples.

For sample F13055-05 the 2-methynaphthalene report limit is elevated due to matrix interference.

Sample extracts were diluted prior to the analysis to properly quantify target parameters in sample F12178-05 and -06. The nominal report limits were not achieved for these samples.

The matrix spike and matrix spike duplicate analyses performed on sample F12178-5 were outside the established accuracy control limits. Native concentration levels in the sample masked the spike levels in 15 of the 21 deficiencies. The remaining 6 deficiencies are likely attributed to co-eluting interferences. All detected results in sample F12178-05 are qualified as estimates and flagged "J"

The container for sample F11298-02, an equipment rinse blank, was found broken upon sample receipt. The containers for sample F13066-06, a trip blank, were not received in the cooler shipment. Sample analyses could not be conducted for the samples.

#### **TPH (Florida PRO) Analyses**

Several of the gas chromatograms indicate the potential presence of two types of hydrocarbon products. Both an early and late eluting profile is present in the analysis. In some of these instances a small portion of total petroleum hydrocarbons (TPH) elutes earlier than the starting time for integrating TPH and is not included in the total measurement.

Matrix spike and matrix spike duplicate recoveries are above the upper control limit in sample F12178-05. Primary sample concentrations (936 mg/Kg) are much greater than the amount of TPH fortified (32.5 mg/Kg) in the sample. The percent recovery data is inconclusive. No action is taken to qualify the sample results.

The laboratory suspected the surrogate in sample F12221-08 was double spiked. The laboratory took no corrective action steps to investigate the apparent error. No action was taken because the accuracy bias is high and target parameters are not detected in the analysis.

The pre-equipment rinse blank sample (F12178-01) contains TPH (C8-C40) at 0.445 mg/L. Action levels were calculated based on the 5X Rule. For soil samples a correction factor of 330X was applied (74 mg/Kg). Sample results for F12178-2, F12178-3, F12178-4, F12178-6, F12178-7, F12178-8, and F12178-9 are less than the action level and have been qualified as non-detected and flagged "U."

The aqueous equipment rinse samples associated with Accutest work order nos., F11289, F11298, and F11333 were not field preserved. Under the Florida PRO protocol all aqueous samples should be preserved with HCl at the time of sample collection. Instead, unpreserved aqueous samples were sent from the field to the laboratory. The laboratory preserved the samples at the time of sample extraction. Because the aqueous samples are field equipment rinse sample the loss of TPH due to biodegradation is not expected to be significant. No action was taken to qualify the sample results.

### **Wet Chemistry Analyses**

No deficiencies were noted in the review.

## **Technical Validity and Usability**

The analytical performance of this data set is very strong. The analytical results meet the data quality objectives defined by the applicable method and NFG, except as noted in the data validation findings. Data completeness is calculated at 100 percent valid data.

## Summary of Qualified Data

A summary of the data qualified during the data validation exercise is summarized in Table 4.

Table 3
SUMMARY OF PROJECT SAMPLES AND REQUESTED ANALYSES (CTO#0011-NWS Whiting Field)

						<u>Q</u>				
						M8015D (FL PRO)				
						SD (F	218	80B	5	9
Lab		QAQC TYPE	Sample Date	Receive Date	Matrix	<b>1801</b>	SW8021B	SW8260B	SW8310	SW9060
220404401	Field ID 16PREEBEB01	EB	5/10/2002	05/14/02	WATER		<u>()</u>	()	18	<u> </u>
220404401	01116CSS01	N	5/10/2002	05/14/02	SOIL				18	
	01116CSS02	N	5/10/2002	05/14/02	SOIL				18	
220404403	011-04-PREEB-W-01-Q1	EB	10/22/2001	10/23/01	WATER	1		4	18	
F11289-1 F11289-2	011-04-PKEEB-VV-01-Q1	N	10/22/2001	10/23/01	SOIL	1		4	18	1
F11289-2 F11289-3	011-04-BKGD-S-43'-Q1	N	10/22/2001	10/23/01	SOIL	1		4	18	1
F11289-3 F11289-4	011-04-MP-30E-S-18'-	N	10/22/2001	10/23/01	SOIL	1		4	18	1
F11289-5	011-04-MP-30E-S-30'-	FD	10/22/2001	10/23/01	SOIL	1		4	18	1
F11289-5	011-04-MP-30E-S-43'-	N	10/22/2001	10/23/01	SOIL	1		4	18	1
F11289-7	011-04-POSTEB-W-01-Q	EB	10/22/2001	10/23/01	WATER	1		4	18	
F11289-8	011-04-TRIPB-W-01-Q1	TB	10/22/2001	10/23/01	WATER			4		
F11209-0 F11298-1	011-04-TRIPB-W-02-Q1	ТВ	10/23/2001	10/24/01	WATER			4		
F11298-1 F11298-2	011-04-PREEB-W-02-Q1	EB	10/23/2001	10/24/01	WATER	1		4		
F11298-2 F11298-3	011-04-MP-30E-S-72'-	N	10/23/2001	10/24/01	SOIL	1		4	18	1
F11298-3 F11298-4	011-04-MIP-30E-3-72- 011-04-BKGD-S-72'-Q1	N	10/23/2001	10/24/01	SOIL	1		4	18	1
	011-04-MP-10N-S-18-Q	N	10/23/2001	10/24/01	SOIL	1		4	18	1
F11298-5	011-04-MP-10N-S-38-Q	N	10/23/2001	10/24/01	SOIL	1		4	18	1
F11298-6	011-04-MP-10N-5-30-Q 011-04-POSTEB-W-02-Q	EB	10/23/2001	10/24/01	WATER	1		4	18	
F11298-7	011-04-F051EB-W-02-Q	ТВ	10/25/2001	10/27/01	WATER	-		4		
F11333-1	011-04-PREEB-W-03-Q1	EB	10/25/2001	10/27/01	WATER	1		4	18	
F11333-2	011-04-MP-5N-S-66'-Q	N	10/25/2001	10/27/01	SOIL	1		4	18	1
F11333-3	011-04-MP-10W-S-18-Q	N	10/25/2001	10/27/01	SOIL	1		4	18	1
F11333-4	011-04-MP-10W-S-43-Q	N	10/25/2001	10/27/01	SOIL	1		4	18	1
F11333-5	011-04-MP-20S-S-18-Q	N	10/26/2001	10/27/01	SOIL	1		4	18	1
F11333-6	011-04-MP-20S-S-10-Q 011-04-MP-20S-S-43-Q	N	10/26/2001	10/27/01	SOIL	1		4	18	1
F11333-7		N	10/26/2001	10/27/01	SOIL	1		4	18	1
F11333-8	011-04-MP-20S-S-72-Q	N	10/26/2001	10/27/01	SOIL	1		4	18	1
F11333-9	011-04-MP-10W-S-72-Q 011-04-POSTEB-W-03-Q	EB	10/26/2001	10/27/01	WATER	1		4	18	
F11333-10	011-04-PREEB-W-01-Q2	EB	1/30/2002	01/31/02	WATER	1	4		18	
F12178-1	011-04-PREEB-W-01-Q2	ТВ	1/30/2002	01/31/02	WATER	·	4			
F12178-11	011-04-MP-10W-S-18'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-2 F12178-3	011-04-MP-10W-S-43'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-3 F12178-4	011-04-MP-10W-S-72'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
	011-04-MP-05N-S-18'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-5 F12178-6	011-04-MP-05N-S-38'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-7	011-04-MP-05N-S-66'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-7 F12178-8	011-04-MP-30E-S-18'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-9	011-04-MP-30E-S-43'-	N	1/30/2002	01/31/02	SOIL	1		4	18	1
F12178-10	011-04-POSTEB-W-01-Q	EB	1/30/2002	01/31/02	WATER	1	4		18	
F12176-10 F12221-1	011-04-PREEB-W-02-Q2	EB	2/4/2002	02/05/02	WATER	1	4		18	
F12221-1	011-04-MP-30E-S-72'-	N	2/4/2002	02/05/02	SOIL	1		4	18	1
F12221-2 F12221-3	011-04-BKGD-S-22'-Q2	N N	2/4/2002	02/05/02	SOIL	1		4	18	1
F12221-4	011-04-BKGD-S-43'-Q2	N	2/4/2002	02/05/02	SOIL	1		4	18	1
F12221-5	011-04-BKGD-S-72'-Q2	N	2/4/2002	02/05/02	SOIL	1		4	18	1
F12221-6	011-04-MP-20S-S-18'-	N	2/4/2002	02/05/02	SOIL	1		4	18	1
F12221-0 F12221-7	011-04-MP-20S-S-43'-	N	2/4/2002	02/05/02	SOIL	1		4	18	1
F12221-7 F12221-8	011-04-MP-20S-S-72'-	N	2/4/2002	02/05/02	SOIL	1		4	18	1
	011-04-MP-20S-S-100'	FD	2/4/2002	02/05/02	SOIL	1		4		
F12221-9	011-04-WIF-203-3-100		2-72002	12 00,02		<del></del>		<u> </u>		

Table 3
SUMMARY OF PROJECT SAMPLES AND REQUESTED ANALYSES
(CTO#0011-NWS Whiting Field)

Lab	Field ID	QAQC TYPE	Sample Date	Receive Date	Matrix	M8015D (FL PRO)	SW8021B	SW8260B	SW8310	SW9060
<b>Sample ID</b> F12221-10	011-04-POSTEB-W-02-Q	EB	2/4/2002	02/05/02	WATER	1	4	4/	18	
F12221-10 F12221-11	011-04-TRIPB-W-02-Q2	TB	2/4/2002	02/05/02	WATER	-	4			
F12221-11 F13055-1	011-04-PREEB-W-01-Q3	EB	4/29/2002	05/01/02	WATER	1	4		18	
F13055-2	011-04-BKGD-S-22'-Q3	N	4/29/2002	05/01/02	SOIL	1		4	18	1
F13055-3	011-04-BKGD-S-43'-Q3	N N	4/29/2002	05/01/02	SOIL	1		4	18	1
F13055-4	011-04-BKGD-S-72'-Q3	N	4/29/2002	05/01/02	SOIL	1		4	18	1
F13055-5	011-04-MP-30E-S-18'-	N	4/29/2002	05/01/02	SOIL	1		4	18	1
F13055-6	011-04-MP-30E-S-43'-	N	4/29/2002	05/01/02	SOIL	1		4	18	1
F13055-7	011-04-POSTEB-W-01-Q	EB	4/29/2002	05/01/02	WATER	1	4		18	
F13055-8	011-04-PREEB-W-02-Q3	EB	4/30/2002	05/01/02	WATER	1	4		18	
F13055-9	011-04-MP-30E-S-72'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-10	011-04-MP-FD1-S-100'	FD	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-11	011-04-MP-05N-S-18'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-12	011-04-MP-05N-S-38'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-13	011-04-MP-05N-S-66'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-14	011-04-MP-10W-S-18'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-15	011-04-MP-10W-S-43'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-16	011-04-MP-10W-S-72'-	N	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-17	011-04-MP-FD2-S-100'	FD	4/30/2002	05/01/02	SOIL	1		4	18	1
F13055-18	011-04-POSTEB-W-01-Q	EB	4/30/2002	05/01/02	WATER	1	4		18	
F13055-19	011-04-TRIPB-W-01-Q3	ТВ	4/30/2002	05/01/02	WATER		4			
F13066-1	011-04-PREEB-W-03-Q3	EB	5/1/2002	05/02/02	WATER	1			18	
F13066-2	011-04-MP-20S-S-18'-	N	5/1/2002	05/02/02	SOIL	1		4	18	1
F13066-3	011-04-MP-30E-S-43'-	N	5/1/2002	05/02/02	SOIL	1		4	18	1
F13066-4	011-04-MP-30E-S-72'-	N	5/1/2002	05/02/02	SOIL	1		4	18	1
F13066-5	011-04-POSTEB-W-01-Q	EB	5/1/2002	05/02/02	WATER	1	4		18	

Table 3
SUMMARY OF PROJECT SAMPLES AND REQUESTED ANALYSES
(CTO#0011-NWS Whiting Field)

						16D (FL PRO)		310	9
Lab Sample ID	Field ID	QAQC TYPE	Sample Date	Receive Date	Matrix	M8015[	2 2	SW831	SW906

Table 3
SUMMARY OF PROJECT SAMPLES AND REQUESTED ANALYSES (CTO#0011-NWS Whiting Field)

Lab Sample ID	Field ID	QAQ TYPE	-	Receive Date	Matrix	M8016D (FL PRO)	SW8021B	SW8260B	SW8310	SW8060
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Table 4
SUMMARY OF QUALIFIED RESULTS
(CTO#0059 - Albany Round 4 Groundwater)

Lab		Analysis		Lab	Valid Valid	Qual
Sample ID	FieldID	Method	Analyte	Result Qual	Result Quai	Code
220404402	01116CSS01	SW8310	Benzo(k)fluoranthene	6.5 F	6.5 J	<
220404403	01116CSS02	SW8310	Anthracene	4 F	4 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8310	Benzo(a)pyrene	68.7 J	68.7 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8310	Benzo(b)fluoranthene	48.3 J	48.3 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8310	Benzo(k)fluoranthene	39.7 J	39.7 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8310	Fluoranthene	235 J	235 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8310	Phenanthrene	144 J	144 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8310	Pyrene	245 J	245 J	<
F11289-2	011-04-BKGD-S-22'-Q1	SW8260B	Toluene	112 J	112 J	<
F11289-3	011-04-BKGD-S-43'-Q1	SW8310	Benzo(b)fluoranthene	48.8 J	48.8 J	<
F11289-3	011-04-BKGD-S-43'-Q1	SW8310	Benzo(g,h,i)perylene	36.3 J	36.3 J	<
F11289-3	011-04-BKGD-S-43'-Q1	SW8310	Benzo(k)fluoranthene	37.8 J	37.8 J	<
F11289-3	011-04-BKGD-S-43'-Q1	SW8310	Indeno(1,2,3-cd)pyrene	35.2 J	35.2 J	<
F11289-3	011-04-BKGD-S-43'-Q1	SW8310	Phenanthrene	342 J	342 J	<
				43.9 J	43.9 J	<
F11289-4	011-04-MP-30E-S-18'-	SW8310	Dibenz(a,h)anthracene		45.9 J 38400 J	P
F11289-4	011-04-MP-30E-S-18'-	SW8260B	Ethylbenzene	38400 =		r <
F11289-4	011-04-MP-30E-S-18'-	SW8310	Fluorene	262 J	262 J	
F11289-4	011-04-MP-30E-S-18'-	SW8260B	Xylene (total)	91000 =	91000 J	P
F11289-5	011-04-MP-30E-S-30'-	SW8310	Dibenz(a,h)anthracene	39.9 J	39.9 J	<
F11289-5	011-04-MP-30E-S-30'-	SW8260B	Ethylbenzene	15900 =	15900 J	Р
F11289-5	011-04-MP-30E-S-30'-	SW8310	Fluorene	306 J	306 J	<
F11289-5	011-04-MP-30E-S-30'-	SW8260B	Toluene	118 J	118 J	<
F11289-5	011-04-MP-30E-S-30'-	SW8260B	Xylene (total)	38800 =	38800 J	Р
F11289-6	011-04-MP-30E-S-43'-	SW8310	Benzo(a)pyrene	43.9 J	43.9 J	<
F11289-6	011-04-MP-30E-S-43'-	SW8310	Benzo(b)fluoranthene	33.8 J	33.8 J	<
F11289-6	011-04-MP-30E-S-43'-	SW8310	Fluoranthene	242 J	242 J	<
F11289-6	011-04-MP-30E-S-43'-	SW8310	Phenanthrene	153 J	153 J	<
F11289-6	011-04-MP-30E-S-43'-	SW8310	Pyrene	204 J	204 J	<
F11289-6	011-04-MP-30E-S-43'-	SW8260B	Toluene	219 J	219 J	<
F11298-3	011-04-MP-30E-S-72'-	SW8310	Fluoranthene	266 J	266 J	<
F11298-3	011-04-MP-30E-S-72'-	SW8310	Phenanthrene	213 J	213 J	<
F11298-3	011-04-MP-30E-S-72'-	SW8310	Pyrene	212 J	212 J	<
F11298-4	011-04-BKGD-S-72'-Q1	SW8310	Fluoranthene	245 J	245 J	<
F11298-4	011-04-BKGD-S-72'-Q1	SW8310	Phenanthrene	203 J	203 J	<
F11298-4	011-04-BKGD-S-72'-Q1	SW8310	Pyrene	197 J	197 J	<
F11298-5	011-04-MP-10N-S-18-Q	SW8310	Acenaphthene	1870 J	1870 J	<
F11298-5	011-04-MP-10N-S-18-Q	SW8310	Benzo(g,h,i)perylene	257 J	257 J	<
F11298-5	011-04-MP-10N-S-18-Q	SW8260B	Toluene	38.2 J	240 U	*
F11298-6	011-04-MP-10N-S-38-Q	SW8310	Benzo(g,h,i)perylene	36.2 J	36.2 J	<
F11298-6	011-04-MP-10N-S-38-Q	SW8310	Chrysene	312 J	312 J	<
F11298-6	011-04-MP-10N-S-38-Q	SW8310	Indeno(1,2,3-cd)pyrene	40.4 J	40.4 J	<
F11298-6	011-04-MP-10N-S-38-Q	SW8260B	Toluene	344 J	344 J	Ε
F11333-3	011-04-MP-5N-S-66'-Q	SW8310	Fluorene	292 J	292 J	<
F11333-4	011-04-MP-10W-S-18-Q	SW8310	Benzo(a)pyrene	62.5 J	62.5 J	<
F11333-4	011-04-MP-10W-S-18-Q	SW8310	Benzo(b)fluoranthene	36.3 J	36.3 J	<
F11333-4	011-04-MP-10W-S-18-Q	SW8310	Fluoranthene	252 J	252 J	<
F11333-4	011-04-MP-10W-S-18-Q	SW8310	Pyrene	240 J	240 J	<
F11333-4	011-04-MP-10W-S-18-Q	SW8260B	Xylene (total)	252 J	252 J	<
F11333-5	011-04-MP-10W-S-43-Q	SW8310	Benzo(a)pyrene	42.2 J	42.2 J	<
	011-04-MP-10W-S-43-Q		Fluoranthene	235 J	235 J	<
F11333-5	U11-04-WIF-1099-3-43-Q	SW8310	i iuvianuicne	2JU J	200 0	-

Table 4
SUMMARY OF QUALIFIED RESULTS
(CTO#0059 - Albany Round 4 Groundwater)

Lab	1	Analysis		Lab	Valid Valid	Qual
Sample ID	FieldID	Method	Analyte	Result Qual	Result Qual	Code
F11333-5	011-04-MP-10W-S-43-Q	SW8310	Pyrene	193 J	193 J	<
F11333-8	011-04-MP-20S-S-72-Q	SW8310	Benzo(a)pyrene	40.9 J	40.9 J	<
F11333-8	011-04-MP-20S-S-72-Q	SW8310	Benzo(b)fluoranthene	40 J	40 J	<
F11333-8	011-04-MP-20S-S-72-Q	SW8310	Benzo(k)fluoranthene	34.4 J	34.4 J	<
F11333-8	011-04-MP-20S-S-72-Q	SW8310	Phenanthrene	294 J	294 J	<
F11333-8	011-04-MP-20S-S-72-Q	SW8310	Pyrene	302 J	302 J	<
F11333-9	011-04-MP-10W-S-72-Q	SW8310	Benzo(a)pyrene	53 J	53 J	<
F11333-9	011-04-MP-10W-S-72-Q	SW8310	Benzo(b)fluoranthene	40.7 J	40.7 J	<
F11333-9	011-04-MP-10W-S-72-Q	SW8310	Benzo(k)fluoranthene	35 J	35 J	<
F11333-9	011-04-MP-10W-S-72-Q	SW8310	Pyrene	174 J	174 J	<
F12178-2	011-04-MP-10W-S-18'-	SW8310	Benzo(a)anthracene	161 J	161 J	<
F12178-2	011-04-MP-10W-S-18'-	SW8310	Benzo(b)fluoranthene	54.4 J	54.4 J	<
F12178-2	011-04-MP-10W-S-18'-	SW8310	Benzo(k)fluoranthene	42.3 J	42.3 J	<
F12178-2	011-04-MP-10W-S-18'-	SW8310	Phenanthrene	352 J	352 J	<
F12178-2	011-04-MP-10W-S-18'-	M8015D	TPH (C8-C40)	16.1 =	16.1 U	В
F12178-3	011-04-MP-10W-S-43'-	SW8310	Benzo(a)pyrene	55.5 J	55.5 J	<
F12178-3	011-04-MP-10W-S-43'-	SW8310	Benzo(b)fluoranthene	48.5 J	48.5 J	<
F12178-3	011-04-MP-10W-S-43'-	SW8310	Benzo(k)fluoranthene	44.5 J	44.5 J	<
F12178-3	011-04-MP-10W-S-43'-	SW8310	Pyrene	178 J	178 J	<
F12178-3	011-04-MP-10W-S-43'-	M8015D	TPH (C8-C40)	10.3 =	10.3 U	В
F12178-4	011-04-MP-10W-S-72'-	SW8260B	Benzene	120 J	120 J	<
F12178-4	011-04-MP-10W-S-72'-	SW8310	Benzo(a)pyrene	69.6 J	69.6 J	<
F12178-4	011-04-MP-10W-S-72'-	SW8310	Benzo(b)fluoranthene	52.7 J	52.7 J	<
F12178-4	011-04-MP-10W-S-72'-	SW8310	Benzo(k)fluoranthene	49.8 J	49.8 J	<
F12178-4	011-04-MP-10W-S-72'-	SW8260B	Ethylbenzene	205 J	205 J	<
F12178-4	011-04-MP-10W-S-72'-	SW8310	Fluoranthene	271 J	271 J	<
F12178-4	011-04-MP-10W-S-72'-	SW8310	Pyrene	263 J	263 J	<
F12178-4	011-04-MP-10W-S-72'-	M8015D	TPH (C8-C40)	14.9 =	14.9 U	В
	011-04-MP-10W-S-72'-	SW8260B	Xylene (total)	436 J	436 J	<
F12178-4		SW8310	2-Methylnaphthalene	7920 J	7920 J	<m< td=""></m<>
F12178-5	011-04-MP-05N-S-18'-	SW8310	Acenaphthene	20400 J	20400 J	<m< td=""></m<>
F12178-5	011-04-MP-05N-S-18'-	SW8310	Anthracene	27700 =	27700 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Benzo(a)anthracene	30200 =	30200 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	• • • • • • • • • • • • • • • • • • • •	13000 =	13000 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Benzo(a)pyrene Benzo(b)fluoranthene	7260 =	7260 J	M
F12178-5	011-04-MP-05N-S-18'-		Benzo(g,h,i)perylene	3050 J	3050 J	<m< td=""></m<>
F12178-5	011-04-MP-05N-S-18'-	SW8310	Benzo(g,n,n)perylene Benzo(k)fluoranthene	6170 =	6170 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	` '	17400 =	17400 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Chrysene	913 J	913 J	<m< td=""></m<>
F12178-5	011-04-MP-05N-S-18'-	SW8310	Dibenz(a,h)anthracene	119000 =	119000 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Fluoranthene	17400 =	17400 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Fluorene	17400 = 3460 =	3460 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Indeno(1,2,3-cd)pyrene		106000 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Phenanthrene	106000 = 92900 =	92900 J	M
F12178-5	011-04-MP-05N-S-18'-	SW8310	Pyrene		709 J	<
F12178-6	011-04-MP-05N-S-38'-	SW8310	Acenaphthene	709 J	709 J 3.6 J	<
F12178-6	011-04-MP-05N-S-38'-	SW8260B	Benzene	3.6 J 132 J	3.6 J 132 J	<
F12178-6	011-04-MP-05N-S-38'-	SW8310	Benzo(g,h,i)perylene		670 J	<
F12178-6	011-04-MP-05N-S-38'-	SW8310	Fluorene	670 J	67.3 U	В
F12178-6	011-04-MP-05N-S-38'-	M8015D	TPH (C8-C40)	67.3 =		• <
F12178-7	011-04-MP-05N-S-66'-	SW8310	Fluoranthene	204 J	204 J	

Table 4
SUMMARY OF QUALIFIED RESULTS
(CTO#0059 - Albany Round 4 Groundwater)

Lab		Analysis		Lab	Valid Valid	Qual
Sample ID	FieldID	Method	Analyte	Result Qual	Result Qual	Code
F12178-7	011-04-MP-05N-S-66'-	SW8310	Pyrene	168 J	168 J	<
F12178-7	011-04-MP-05N-S-66'-	M8015D	TPH (C8-C40)	6.91 J	8.6 U	В
F12178-7	011-04-MP-05N-S-66'-	SW8260B	Xylene (total)	703 J	703 J	<
F12178-8	011-04-MP-30E-S-18'-	SW8310	Benzo(a)pyrene	63.8 J	63.8 J	<
F12178-8	011-04-MP-30E-S-18'-	SW8310	Benzo(b)fluoranthene	45.4 J	45.4 J	<
F12178-8	011-04-MP-30E-S-18'-	SW8310	Benzo(k)fluoranthene	41.6 J	41.6 J	<
F12178-8	011-04-MP-30E-S-18'-	M8015D	TPH (C8-C40)	40.9 =	40.9 U	В
F12178-9	011-04-MP-30E-S-43'-	SW8310	Benzo(a)pyrene	60.4 J	60.4 J	<
F12178-9	011-04-MP-30E-S-43'-	SW8310	Benzo(b)fluoranthene	43.3 J	43.3 J	<
F12178-9	011-04-MP-30E-S-43'-	SW8310	Benzo(k)fluoranthene	42.5 J	42.5 J	<
F12178-9	011-04-MP-30E-S-43'-	SW8260B	Ethylbenzene	103 J	103 J	<
F12178-9	011-04-MP-30E-S-43'-	SW8260B	Toluene	94.2 J	94.2 J	<
F12178-9	011-04-MP-30E-S-43'-	M8015D	TPH (C8-C40)	23.8 =	23.8 U	В
F12178-9	011-04-MP-30E-S-43'-	SW8260B	Xylene (total)	238 J	238 J	<
F12221-2	011-04-MP-30E-S-72'-	SW8260B	Ethylbenzene	4.7 J	4.7 J	<
F12221-2	011-04-MP-30E-S-72'-	SW8310	Fluoranthene	180 J	180 J	<
F12221-2	011-04-MP-30E-S-72'-	SW8310	Phenanthrene	149 J	149 J	<
F12221-2	011-04-MP-30E-S-72'-	SW8310	Pyrene	139 J	139 J	<
F12221-2	011-04-MP-30E-S-72'-	M8015D	TPH (C8-C40)	7.41 J	7.41 J	<
F12221-2	011-04-MP-30E-S-72'-	SW8260B	Xylene (total)	15.2 J	15.2 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Benzo(b)fluoranthene	53.1 J	53.1 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Benzo(g,h,i)perylene	36.9 J	36.9 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Benzo(k)fluoranthene	42.1 J	42.1 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Fluoranthene	310 J	310 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Indeno(1,2,3-cd)pyrene	37 J	37 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Phenanthrene	250 J	250 J	<
F12221-3	011-04-BKGD-S-22'-Q2	SW8310	Pyrene	266 J	266 J	<
F12221-3	011-04-BKGD-S-22'-Q2	M8015D	TPH (C8-C40)	8.53 J	8.53 J	<
F12221-4	011-04-BKGD-S-43'-Q2	SW8310	Benzo(b)fluoranthene	61.8 J	61.8 J	<
F12221-4	011-04-BKGD-S-43'-Q2	SW8310	Benzo(g,h,i)perylene	43.6 J	43.6 J	<
F12221-4	011-04-BKGD-S-43'-Q2	SW8310	Benzo(k)fluoranthene	45.8 J	45.8 J	<
F12221-4	011-04-BKGD-S-43'-Q2	SW8310	Fluoranthene	358 J	358 J	<
F12221-4	011-04-BKGD-S-43'-Q2	SW8310	Phenanthrene	303 J	303 J	<
F12221-4	011-04-BKGD-S-43'-Q2	SW8310	Pyrene	306 J	306 J	<
F12221-5	011-04-BKGD-S-72'-Q2	SW8310	Benzo(a)anthracene	221 J	221 J	<
F12221-5	011-04-BKGD-S-72'-Q2	SW8310	Benzo(g,h,i)perylene	62.3 J	62.3 J	<
F12221-5	011-04-BKGD-S-72'-Q2	SW8310	Chrysene	248 J	248 J	<
F12221-5	011-04-BKGD-S-72'-Q2	SW8310	Indeno(1,2,3-cd)pyrene	40.6 J	40.6 J	<
F12221-7	011-04-MP-20S-S-43'-	M8015D	TPH (C8-C40)	8.09 J	8.09 J	<
F12221-8	011-04-MP-20S-S-72'-	SW8260B	Ethylbenzene	1.1 J	1.1 J	<
F12221-8	011-04-MP-20S-S-72'-	SW8260B	Xylene (total)	5.7 J	5.7 J	<
F12221-9	011-04-MP-20S-S-100	SW8260B	Ethylbenzene	2.9 J	2.9 J	<
F12221-9	011-04-MP-20S-S-100	SW8260B	Xylene (total)	3 J	3 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Acenaphthene	268 J	268 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Anthracene	279 J	279 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Benzo(a)anthracene	324 J	324 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Benzo(g,h,i)perylene	49.2 J	49.2 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Chrysene	308 J	308 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Fluorene	272 J	272 J	<
F13055-10	011-04-MP-FD1-S-100'	SW8310	Indeno(1,2,3-cd)pyrene	43.4 J	43.4 J	<

Table 4
SUMMARY OF QUALIFIED RESULTS
(CTO#0059 - Albany Round 4 Groundwater)

	<del>                                     </del>	Analysis		Lab	Valid Valid	Qual
Lab Sample ID	FieldID	Method	Analyte	Result Qual	Result Qual	Code
F13055-11	011-04-MP-05N-S-18'-	SW8310	1-Methylnaphthalene	187 J	187 J	
	011-04-MP-05N-S-18'-	SW8310	Anthracene	236 J	236 J	<
F13055-11		SW8310	Benzo(a)anthracene	210 J	210 J	<
F13055-11	011-04-MP-05N-S-18'-		Benzo(b)fluoranthene	68.5 J	68.5 J	<
F13055-11	011-04-MP-05N-S-18'-	SW8310	Benzo(g,h,i)perylene	31.7 J	31.7 J	<
F13055-11	011-04-MP-05N-S-18'-	SW8310	Benzo(k)fluoranthene	50.7 J	50.7 J	<
F13055-11	011-04-MP-05N-S-18'-	SW8310	` '	248 J	248 J	<
F13055-11	011-04-MP-05N-S-18'-	SW8310	Chrysene	240 J 225 J	225 J	<
F13055-11	011-04-MP-05N-S-18'-	SW8260B	Ethylbenzene	37.9 J	37.9 J	<
F13055-11	011-04-MP-05N-S-18'-	SW8310	Indeno(1,2,3-cd)pyrene	298 J	298 J	<
F13055-12	011-04-MP-05N-S-38'-	SW8310	Anthracene	296 J 234 J	234 J	~
F13055-12	011-04-MP-05N-S-38'-	SW8310	Fluorene	55.9 J	55.9 J	<
F13055-12	011-04-MP-05N-S-38'-	SW8310	Indeno(1,2,3-cd)pyrene	14.6 J	14.6 J	<
F13055-12	011-04-MP-05N-S-38'-	SW8260B	Xylene (total)	164 J	164 J	<
F13055-13	011-04-MP-05N-S-66'-	SW8310	Anthracene	305 J	305 J	<
F13055-13	011-04-MP-05N-S-66'-	SW8310	Benzo(a)anthracene	48.8 J	48.8 J	<
F13055-13	011-04-MP-05N-S-66'-	SW8310	Benzo(g,h,i)perylene	46.6 J 292 J	292 J	<
F13055-13	011-04-MP-05N-S-66'-	SW8310	Chrysene	292 J 99.3 J	99.3 J	<
F13055-13	011-04-MP-05N-S-66'-	SW8310	Fluorene	35.8 J	35.8 J	<
F13055-13	011-04-MP-05N-S-66'-	SW8310	Indeno(1,2,3-cd)pyrene	35.6 J 47.4 J	47.4 J	<
F13055-14	011-04-MP-10W-S-18'-	SW8310	Benzo(a)anthracene	47.4 J 5000 =	5000 J	P
F13055-14	011-04-MP-10W-S-18'-	SW8260B	Ethylbenzene		120 J	<
F13055-14	011-04-MP-10W-S-18'-	SW8310	Fluoranthene	120 J	120 J 82 J	<
F13055-14	011-04-MP-10W-S-18'-	SW8310	Phenanthrene	82 J		<
F13055-14	011-04-MP-10W-S-18'-	SW8310	Pyrene	102 J	102 J	<
F13055-14	011-04-MP-10W-S-18'-	SW8260B	Toluene	187 J	187 J	
F13055-14	011-04-MP-10W-S-18'-	SW8260B	Xylene (total)	7640 =	7640 J	P
F13055-15	011-04-MP-10W-S-43'-	SW8310	Benzo(a)anthracene	73.1 J	73.1 J	<
F13055-15	011-04-MP-10W-S-43'-	SW8310	Fluoranthene	254 J	254 J	<
F13055-15	011-04-MP-10W-S-43'-	SW8310	Phenanthrene	155 J	155 J	<
F13055-15	011-04-MP-10W-S-43'-	SW8310	Pyrene	224 J	224 J	<
F13055-15	011-04-MP-10W-S-43'-	M8015D	TPH (C8-C40)	7.67 J	7.67 J	<
F13055-16	011-04-MP-10W-S-72'-	SW8310	Anthracene	230 J	230 J	<
F13055-16	011-04-MP-10W-S-72'-	SW8310	Benzo(a)anthracene	349 J	349 J	<
F13055-16	011-04-MP-10W-S-72'-	SW8310	Benzo(g,h,i)perylene	46.2 J	46.2 J	<
F13055-16	011-04-MP-10W-S-72'-	SW8310	Fluorene	141 J	141 J	<
F13055-16	011-04-MP-10W-S-72'-	SW8310	Indeno(1,2,3-cd)pyrene	40.2 J	40.2 J	<
F13055-17	011-04-MP-FD2-S-100'	SW8310	Benzo(a)anthracene	42.7 J	42.7 J	<
F13055-17	011-04-MP-FD2-S-100	SW8260B	Ethylbenzene	62300 =	62300 J	P
F13055-17	011-04-MP-FD2-S-100'	SW8310	Fluoranthene	113 J	113 J	<
F13055-17	011-04-MP-FD2-S-100'	SW8310	Phenanthrene	85.7 J	85.7 J	<
F13055-17	011-04-MP-FD2-S-100'	SW8310	Pyrene	96.3 J	96.3 J	<
F13055-17	011-04-MP-FD2-S-100'	SW8260B	Xylene (total)	53600 =	53600 J	P
F13055-2	011-04-BKGD-S-22'-Q3	SW8310	Benzo(a)anthracene	73.5 J	73.5 J	<
F13055-2	011-04-BKGD-S-22'-Q3	SW8310	Chrysene	109 J	109 J	<
F13055-2	011-04-BKGD-S-22'-Q3	SW8310	Fluoranthene	198 J	198 J	<
F13055-2	011-04-BKGD-S-22'-Q3	SW8310	Phenanthrene	161 J	161 J	<
F13055-2	011-04-BKGD-S-22'-Q3	SW8310	Pyrene	170 J	170 J	<
F13055-3	011-04-BKGD-S-43'-Q3	SW8310	Fluoranthene	102 J	102 J	<
F13055-3	011-04-BKGD-S-43'-Q3	SW8310	Phenanthrene	101 J	101 J	<
F13055-3	011-04-BKGD-S-43'-Q3	SW8310	Pyrene	88.9 J	88.9 J	<

Table 4
SUMMARY OF QUALIFIED RESULTS
(CTO#0059 - Albany Round 4 Groundwater)

Lab	T	Analysis		Lab	Valid Valid	Qual
Sample ID	FieldID	Method	Analyte	Result Qual	Result Qual	Code
F13055-3	011-04-BKGD-S-43'-Q3	SW8260B	Toluene	290 J	290 J	<
F13055-4	011-04-BKGD-S-72'-Q3	SW8310	Fluoranthene	108 J	108 J	<
F13055-4	011-04-BKGD-S-72'-Q3	SW8310	Phenanthrene	107 J	107 J	<
F13055-4	011-04-BKGD-S-72'-Q3	SW8310	Pyrene	90.1 J	90.1 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	1-Methylnaphthalene	156 J	156 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	Anthracene	249 J	249 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	Benzo(a)anthracene	225 J	225 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	Benzo(g,h,i)perylene	37.5 J	37.5 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	Benzo(k)fluoranthene	62.5 J	62.5 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	Chrysene	187 J	187 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8310	Indeno(1,2,3-cd)pyrene	44.3 J	44.3 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8260B	Toluene	124 J	124 J	<
F13055-5	011-04-MP-30E-S-18'-	SW8260B	Xylene (total)	499 J	499 J	<
F13055-6	011-04-MP-30E-S-43'-	SW8310	Benzo(a)anthracene	167 J	167 J	<
F13055-6	011-04-MP-30E-S-43'-	SW8310	Benzo(b)fluoranthene	64.3 J	64.3 J	<
F13055-6	011-04-MP-30E-S-43'-	SW8310	Benzo(g,h,i)perylene	47.7 J	47.7 J	<
F13055-6	011-04-MP-30E-S-43'-	SW8310	Benzo(k)fluoranthene	56.6 J	56.6 J	<
F13055-6	011-04-MP-30E-S-43'-	SW8310	Chrysene	162 J	162 J	<
F13055-6	011-04-MP-30E-S-43'-	SW8260B	Toluene	2.9 J	2.9 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8310	Benzo(a)anthracene	113 J	113 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8310	Benzo(a)pyrene	51 J	51 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8310	Benzo(b)fluoranthene	36.7 J	36.7 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8310	Chrysene	133 J	133 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8260B	Ethylbenzene	324 J	324 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8310	Pyrene	343 J	343 J	<
F13055-9	011-04-MP-30E-S-72'-	SW8260B	Xylene (total)	959 J	959 J	<
F13066-2	011-04-MP-20S-S-18'-	M8015D	TPH (C8-C40)	9.32 J	9.32 J	<
F13066-4	011-04-MP-30E-S-72'-	SW8310	Benzo(a)anthracene	64.3 J	64.3 J	<
F13066-4	011-04-MP-30E-S-72'-	SW8260B	Ethylbenzene	157 J	157 J	<
F13066-4	011-04-MP-30E-S-72'-	SW8310	Fluoranthene	212 J	212 J	<
F13066-4	011-04-MP-30E-S-72'-	SW8310	Phenanthrene	160 J	160 J	<
F13066-4	011-04-MP-30E-S-72'-	SW8310	Pyrene	167 J	167 J	<
F13066-4	011-04-MP-30E-S-72'-	SW8260B	Xylene (total)	367 J	367 J	<

**Volatile Organic Analyses** 

Client Sample ID: 011-04-PREEB-W-01-Q1

Lab Sample ID:

F11289-1

AQ - Ground Water

Date Sampled:

10/22/01

Matrix: Method:

Date Received:

10/23/01

SW846 8260B

Percent Solids: n/a

Project:

NAS Whiting Field CTO-0011

Analyzed

10/25/01

By JG

DF

1

**Prep Date Prep Batch Analytical Batch** 

Run #1 Run #2 n/a

n/a

VB293

**Purgeable Aromatics** 

File ID

B0006811.D

	CAS No.	Compound	Result	RL	Units Q
	71-43-2	Benzene	ND	1.0	ug/l
	108-88-3	Toluene	ND	2.0	ug/l
	100-41-4	Ethylbenzene	ND	2.0	ug/l
	1330-20-7	Xylene (total)	ND	6.0	ug/l
	CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	1868-53-7	Dibromofluoromethane	98%		80-120%
₽-	17060-07-0	1,2-Dichloroethane-D4	88%		80-120%
	2037-26-5	Toluene-D8	93%		80-120%
	460-00-4	4-Bromofluorobenzene	95%		80-120%



B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-22'-Q1

Lab Sample ID: Matrix:

F11289-2

Method:

SO - Soil

Project:

SW846 8260B NAS Whiting Field CTO-0011 Date Sampled: 10/22/01

Date Received: 10/23/01 Percent Solids: 86.1

Run #1 Run #2	File ID G015609.D G015615.D	<b>DF</b> 50 500	Analyzed 10/25/01 10/25/01	By RAW RAW	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch VG479 VG479	
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#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q	Qual
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 112 13200 * 39000 *	230 230 2300 6900	ug/kg U ug/kg J ug/kg = ug/kg =	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	123 % 90 % 88 % 113 %	106% 96% 98% 98%	75-125% 75-125% 72-137% 68-125%	

(a) Result is from Run# 2

mus bhalor

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-43'-Q1

Lab Sample ID:

F11289-3

Matrix: Method: SO - Soil SW846 8260B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 10/22/01 Date Received: 10/23/01

Percent Solids: 94.7

Run #2 G015616.D 500 10/25/01 RAW n/a n/a VG4/9	Run #1	File ID G015610.D G015616.D	<b>DF</b> 50 500	Analyzed 10/25/01 10/25/01	By RAW RAW	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch VG479 VG479
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## **Purgeable Aromatics**

Purgeable A	romatics					(June)
CAS No.	Compound	Result	RL	Units	Q	Code
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene	ND 2180 10700 * 39700 *	270 270 2700 8200	ug/kg ug/kg ug/kg ug/kg	= =	
1330-20-7 CAS No.	Xylene (total) Surrogate Recoveries	Run# 1	Run# 2		mits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	107% 101% 89% 96%	108% 90% 89% 100%	75 72	-125% -125% -137% -125%	

(a) Result is from Run# 2

omu bleda

By

**RAW** 

NAF

Client Sample ID: 011-04-MP-30E-S-30'-Q1

Lab Sample ID:

F11289-5

Matrix: Method:

Project:

Run #1

Run #2

SO - Soil

File ID

G015618.D

H014132.D

SW846 8260B

DF

50

200

NAS Whiting Field CTO-0011

Date Sampled: Date Received: 10/23/01

Prep Date

n/a

n/a

10/22/01

90.4 Percent Solids:

> **Prep Batch Analytical Batch**

VG479 n/a VH443 n/a

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q	and
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 118 15900 <sup>a</sup> 38800 <sup>a</sup>	230 230 940 2800	ug/kg V ug/kg J ug/kg T ug/kg J	< P P
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	118% 93% 94% 107%	89% 118% 102% 88%	75-125% 75-125% 72-137% 68-125%	

Analyzed

10/25/01

11/05/01

(a) Result is from Run# 2

omno 6/25/02

Client Sample ID: 011-04-MP-30E-S-18'-Q1

Lab Sample ID:

F11289-4

Matrix:

SO - Soil

Method: Project: SW846 8260B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/22/01 **Date Received:** 10/23/01

Percent Solids: 90.5

Run #1	File ID G015617.D	<b>DF</b> 500	<b>Analyzed</b> 10/25/01	By RAW	Prep Date n/a	Prep Batch n/a	Analytical Batch VG479
Run #2							

### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q	Code
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 38400 91000	2300 2300 2300 6900	ug/kg U ug/kg U ug/kg T ug/kg J	P P
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	110% 98% 88% 102%		75-125% 75-125% 72-137% 68-125%	

emus 6/25/ce

B = Indicates analyte found in associated method blank

Client Sample ID: 011-04-MP-30E-S-43'-Q1

Lab Sample ID:

F11289-6

Matrix: Method: SO - Soil

Project:

SW846 8260B

Date Sampled: 10/22/01 Date Received: 10/23/01 Percent Solids: 93.5

NAS Whiting Field CTO-0011

Run #1	File ID G015619.D	<b>DF</b> 50	<b>Analyzed</b> 10/25/01	By RAW	Prep Date n/a	Prep Batch n/a	Analytical Batch VG479	
Run #2			r					J

Purgeable Aromatics									
CAS No.	Compound	Result	RL	Units Q	Cide				
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 219 458 1550	290 290 290 860	ug/kg U ug/kg J ug/kg = ug/kg =	۷				
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits					
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	105% 96% 89% 91%		75-125 % 75-125 % 72-137 % 68-125 %					

CMW 6/24/02

Client Sample ID: 011-04-POSTEB-W-01-Q1

Lab Sample ID:

F11289-7

Matrix:

AQ - Ground Water SW846 8260B

Method:

NAS Whiting Field CTO-0011

Date Sampled: 10/22/01 Date Received: 10/23/01

Percent Solids: n/a

Project:

					==		4 1 14 1 TD - 4 - 1.
	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	B0006812.D	1	10/25/01	JG	n/a	n/a	VB293

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	1.0 2.0 2.0 6.0	ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	99% 90% 92% 95%		80-120 % 80-120 % 80-120 % 80-120 %

omo blaslor

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Вy

JG

Page 1 of 1

Client Sample ID: 011-04-TRIPB-W-01-Q1

Lab Sample ID: F11289-8

Matrix:

AQ - Trip Blank Water

Method:

SW846 8260B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/22/01 Date Received: 10/23/01

Percent Solids: n/a

Run #1

Project:

Analyzed File ID DF 10/25/01 1 B0006813.D

**Analytical Batch Prep Batch Prep Date** VB293 n/a n/a

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	1.0 2.0 2.0 6.0	ug/l (\) ug/l   \) ug/l \(\frac{1}{2}\)
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	98% 89% 94% 96%		80-120% 80-120% 80-120% 80-120%

cmw 6/25/12

N = Indicates presumptive evidence of a compound

Method:

Project:

## **Report of Analysis**

Client Sample ID: 011-04-MP-10N-S-18-Q1

F11298-5 Lab Sample ID: Matrix:

SO - Soil SW846 8260B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/23/01 Date Received: 10/24/01

Percent Solids: 87.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0015661.D	50	11/02/01	KW	n/a	n/a	VG482
Run #2	G0015685.D	200	11/05/01	KW	n/a	n/a	VG483

#### **Purgeable Aromatics**

CAS No.	Compound		Result	RL	Units	Q
71-43-2	Benzene		ND	240	ug/kg	ч
108-88-3	Toluene	ND	_38 <del>.2</del>	240	ug/kg_	F 4
100-41-4	Ethylbenzene		9570 ª	960	ug/kg	
1330-20-7	Xylene (total)		10100	720	ug/kg	=
CAS No.	Surrogate Recoveries		Run# 1	Run# 2	Lin	nits
1868-53-7	Dibromofluoromethane		89%	95%	75-	125%
2037-26-5	Toluene-D8		90%	84%	75-	125%
460-00-4	4-Bromofluorobenzene		78%	90%	<b>72-</b>	137%
17060-07-0	1,2-Dichloroethane-D4		79%	91%	68-	125%

(a) Result is from Run# 2

ommo 6/25/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10N-S-38-Q1

Lab Sample ID: F11298-6

Matrix: Method: SO - Soil SW846 8260B

Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 10/23/01 Date Received: 10/24/01

Percent Solids: 90.2

Run #1 Run #2	File ID H014131.D G0015660.D	<b>DF</b> 1 50	<b>Analyzed</b> 11/05/01 11/02/01	By NAF KW	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch VH443 VG482
------------------	------------------------------------	----------------------	-----------------------------------	-----------------	-------------------------	--------------------------	------------------------------------

Purgeable A	romatics				Quel
CAS No.	Compound	Result	RL	Units Q	Code
71-43-2	Benzene	34,1	6.9	ug/kg	
108-88-3	Toluene	344	6.9	ug/kg Eブ	E
100-41-4	Ethylbenzene	120	6.9	ug/kg =	
1330-20-7	Xylene (total)	353	21	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	89%	101%	75-125%	
2037-26-5	Toluene-D8	124%	80%	75-125%	
460-00-4	4-Bromofluorobenzene	104%	86%	72-137%	
17060-07-0	1,2-Dichloroethane-D4	78%	90%	68-125%	

Como 6/25/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

JG

Client Sample ID: 011-04-POSTEB-W-02-Q1

Lab Sample ID:

F11298-7

Matrix:

AQ - Field Blank Water

File ID

B0006830.D

SW846 8260B

DF

1

Date Sampled: 10/23/01

Date Received: 10/24/01

Percent Solids: n/a

n/a

Method: Project:

NAS Whiting Field CTO-0011

**Prep Batch** Prep Date

n/a

**Analytical Batch** 

**VB294** 

Run #1 Run #2

Purgeable A	Aromatics, MTBE						$\sim 1$
CAS No.	Compound	Result	RL	Units	Q		Code
71-43-2	Benzene	ND	1.0	ug/l	u		
108-88-3	Toluene	ND	2.0	ug/l	١		
100-41-4	Ethylbenzene	ND	2.0	ug/l	1		
1330-20-7	Xylene (total)	ND	6.0	ug/l	4		
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	ug/l		<del>CMD</del>	*
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Liı	nits		

Analyzed

10/26/01

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101 %		80-120%
17060-07-0	1,2-Dichloroethane-D4	91 %		80-120%
2037-26-5	Toluene-D8	93 %		80-120%
460-00-4	4-Bromofluorobenzene	93 %		80-120%

omo 6/25/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

JG

Analyzed

10/30/01

Client Sample ID: 011-04-TRIPB-W-03-Q1

Lab Sample ID:

F11333-1

Matrix:

AQ - Trip Blank Soil

Method:

SW846 8260B

**Date Sampled:** 10/25/01 Date Received: 10/27/01

Percent Solids: n/a

Project:

NAS Whiting Field CTO-0011

DF

**Analytical Batch Prep Batch Prep Date** VC304 n/a n/a

Run #1 Run #2

### **Purgeable Aromatics**

File ID

C0006378.D

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	ч
108-88-3	Toluene	ND	2.0	ug/l	1
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	ug/l	¥
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lir	nits
1868-53-7	Dibromofluoromethane	100%		80-	120%
17060-07-0	1,2-Dichloroethane-D4	102%		80-	120%
2037-26-5	Toluene-D8	100%		80-	120%
460-00-4	4-Bromofluorobenzene	104%		80-	-120%

mas 6/25/02

Client Sample ID: 011-04-PREEB-W-03-Q1

Lab Sample ID: F11333-2

Matrix: AQ - Field Blank Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/25/01 Date Received: 10/27/01

Percent Solids: n/a

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 C0006379.D 10/30/01 JG n/a n/a VC304

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l U ug/l ug/l
108-88-3	Toluene	ND	2.0	
100-41-4	Ethylbenzene	ND	2.0	
1330-20-7	Xylene (total)	ND	6.0	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		80-120%
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%

omo 6/25/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-5N-S-66'-Q1

Lab Sample ID: Matrix:

Method:

F11333-3 SO - Soil

SW846 8260B

Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 10/25/01

Date Received: 10/27/01 Percent Solids: 89.9

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	G0015676.D	500	11/05/01	KW	n/a	n/a	VG483
Run #2	G0015686.D	1000	11/05/01	KW	n/a	n/a	VG483

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL 1	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 68000 * 31200 112000	4800 1 2400 1	ug/kg U ug/kg = ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	95% 90% 87% 89%	95% 84% 95% 89%	75-125% 75-125% 72-137% 68-125%

#### (a) Result is from Run# 2

cmus 6/25/62

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-18-Q1

Lab Sample ID:

F11333-4

NAS Whiting Field CTO-0011

Matrix: Method: SO - Soil

Project:

SW846 8260B

**Date Sampled:** 10/25/01

Date Received: 10/27/01

Percent Solids: 87.7

Run #1	File ID G0015677.D	<b>DF</b> 50	<b>Analyzed</b> 11/05/01	By KW	Prep Date n/a	Prep Batch n/a	Analytical Batch VG483
Run #2							

Purgeable A	romatics				J
CAS No.	Compound	Result	RL	Units Q	Code
71-43-2	Benzene	ND	220	ug/kg U	
108-88-3	Toluene	ND	220	ug/kg <b>U</b>	
100-41-4	Ethylbenzene	2100	220	ug/kg =	
1330-20-7	Xylene (total)	252	670	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	93%		75-125%	
2037-26-5	Toluene-D8	86%		75-125%	
460-00-4	4-Bromofluorobenzene	88%		72-137%	
17060-07-0	1,2-Dichloroethane-D4	85%		68-125%	

cmo 6/25/02

N = Indicates presumptive evidence of a compound

By

KW

Analyzed

11/05/01

Client Sample ID: 011-04-MP-10W-S-43-Q1

Lab Sample ID: Matrix:

F11333-5

Method:

SO - Soil SW846 8260B

Project:

NAS Whiting Field CTO-0011

DF

2000

**Date Sampled:** 10/25/01 Date Received:

n/a

10/27/01

Percent Solids: 83.8

**Prep Batch Prep Date Analytical Batch** 

n/a

VG483

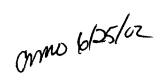
Run #1 Run #2

#### **Purgeable Aromatics**

File ID

G0015680.D

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	9600	ug/kg U
108-88-3	Toluene	139000	9600	ug/kg ±
100-41-4	Ethylbenzene	49300	9600	ug/kg =
1330-20-7	Xylene (total)	98900	29000	ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		75-125%
2037-26-5	Toluene-D8	80%		75-125%
460-00-4	4-Bromofluorobenzene	94%		72-137%
17060-07-0	1,2-Dichloroethane-D4	90%		68-125%



B = Indicates analyte found in associated method blank

Client Sample ID: 011-04-MP-20S-S-18-Q1

Lab Sample ID: Matrix:

Method:

Project:

F11333-6

SO - Soil

SW846 8260B

**Date Sampled:** 10/26/01 Date Received: 10/27/01

Percent Solids: 89.3

NAS Whiting Field CTO-0011

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0015682.D	50	11/05/01	KW	n/a	n/a	VG483
Dun #2							

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 1600 1520	240 240 240 710	ug/kg U ug/kg U ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	93% 86% 93% 84%		75-125% 75-125% 72-137% 68-125%



Client Sample ID: 011-04-MP-20S-S-43-Q1

Lab Sample ID:

F11333-7

Matrix:

SO - Soil

Method: Project:

SW846 8260B NAS Whiting Field CTO-0011

**Date Sampled:** 10/26/01 Date Received: 10/27/01

Percent Solids: 93.4

**Prep Date Prep Batch Analytical Batch** File ID DF Analyzed By NAF VK246 K007251.D 11/05/01 n/a n/a Run #1

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	5.6 5.6 5.6 17	ug/kg ug/kg ug/kg ug/kg
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	99% 97% 101% 99%		75-125 % 75-125 % 72-137 % 68-125 %

cma 6/25/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

KW

Client Sample ID: 011-04-MP-20S-S-72-Q1

Lab Sample ID: Matrix:

F11333-8 SO - Soil

SW846 8260B

**Date Sampled:** 10/26/01 Date Received: Percent Solids: 91.7

n/a

10/27/01

Method: Project:

NAS Whiting Field CTO-0011

Analyzed

11/05/01

DF

500

**Prep Date Prep Batch Analytical Batch** 

VG483 n/a

Run #1 Run #2

#### **Purgeable Aromatics**

File ID

G0015683.D

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	2570 31800 15800 47600	2500 2500 2500 7500	ug/kg ug/kg ug/kg
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	96% 82% 94% 92%		75-125% 75-125% 72-137% 68-125%

CM10 6/25/02

Client Sample ID: 011-04-MP-10W-S-72-Q1

Lab Sample ID: Matrix:

F11333-9 SO - Soil

Method: SW846 8260B Project:

NAS Whiting Field CTO-0011

Date Sampled: 10/26/01 Date Received: 10/27/01

Percent Solids: 90.0

File ID DF Analyzed By **Prep Date Prep Batch Analytical Batch** Run #1 K007252.D 11/05/01 NAF n/a n/a VK246

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	4.8 4.8 4.8 14	ug/kg ug/kg ug/kg ug/kg
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	91% 108% 101% 90%		75-125% 75-125% 72-137% 68-125%

cmo 6/25/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-POSTEB-W-03-Q1

Lab Sample ID:

F11333-10

Matrix:

AQ - Field Blank Soil

DF

1

Method:

SW846 8260B

Project:

NAS Whiting Field CTO-0011

Date Sampled:

10/26/01

Date Received: 10/27/01

Percent Solids: n/a

Run #1 Run #2 File ID C0006380.D

Analyzed 10/30/01

By JG

**Prep Date** n/a

**Prep Batch** 

**Analytical Batch** 

n/a VC304

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l Ug/l ug/l Ug/l
108-88-3	Toluene	ND	2.0	
100-41-4	Ethylbenzene	ND	2.0	
1330-20-7	Xylene (total)	ND	6.0	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101 %		80-120%
17060-07-0	1,2-Dichloroethane-D4	105 %		80-120%
2037-26-5	Toluene-D8	101 %		80-120%
460-00-4	4-Bromofluorobenzene	100 %		80-120%

como 6/20102

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-PREEB-W-01-Q2

Lab Sample ID:

F12178-1

Matrix:

AQ - Field Blank Soil

SW846 8021B

Method: Project:

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: n/a

File ID DF Analyzed By **Prep Date Prep Batch Analytical Batch** Run#1 EF016554.D 02/05/02 RM n/a n/a **GEF518** 

Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylenes (total)	ND ND ND ND	1.0 1.0 1.0 3.0	ug/l U ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0 98-08-8	1-Chloro-4-fluorobenzene aaa-Trifluorotoluene	106% 108%		80-120% 70-127%

Cmo 6/26/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Вy

NAF

Analyzed

02/08/02

Client Sample ID: 011-04-MP-10W-S-18'-Q2

Lab Sample ID:

F12178-2

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

DF

50

Date Sampled: 01/30/02

**Prep Date** 

n/a

Date Received: 01/31/02

Percent Solids: 87.0

**Analytical Batch Prep Batch** VH495 n/a

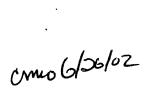
Run #1 Run #2

**Purgeable Aromatics** 

File ID

H015304.D

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 10700 7040	290 290 290 880	ug/kg U ug/kg U ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	109% 104% 102% 108%		75-125% 75-125% 72-137% 68-125%



Client Sample ID: 011-04-MP-10W-S-43'-Q2

Lab Sample ID:

F12178-3 SO - Soil

Matrix: Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

**Date Sampled:** 01/30/02 **Date Received:** 01/31/02

Percent Solids: 91.1

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	H015299.D	1	02/08/02	NAF	n/a	n/a	VH495

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	73.1 15.5	7.8 7.8 7.8 23	ug/kg = ug/kg = ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	94% 101% 103% 96%		75-125% 75-125% 72-137% 68-125%



Client Sample ID: 011-04-MP-10W-S-72'-Q2

Lab Sample ID:

F12178-4

Matrix: Method:

Project:

SO - Soil

SW846 8260B

NAS Whiting Field CTO-0011

DF

50

Date Sampled: 01/30/02

Date Received: 01/31/02 Percent Solids: 88.4

Run #1 Run #2 File ID H015305.D Analyzed 02/08/02

Вy NAF

n/a

n/a

VH495

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q	Code
71-43-2	Benzene	120	290	ug/kg J	<
108-88-3	Toluene	682	290	ug/kg =	
100-41-4	Ethylbenzene	205	290	ug/kg J	7
1330-20-7	Xylene (total)	436	870	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	91%		75-125%	
2037-26-5	Toluene-D8	100%		75-125%	
460-00-4	4-Bromofluorobenzene	101%		72-137%	
17060-07-0	1,2-Dichloroethane-D4	93%		68-125%	



B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

NAF

Analyzed

02/08/02

Client Sample ID: 011-04-MP-05N-S-18'-Q2

Lab Sample ID:

F12178-5

Matrix:

SO - Soil

Method: Project:

SW846 8260B NAS Whiting Field CTO-0011

DF

500

Date Sampled: 01/30/02

Prep Date

n/a

Date Received: 01/31/02

Percent Solids: 88.3

**Prep Batch Analytical Batch** 

VH495 n/a

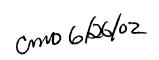
Run #1 Run #2

**Purgeable Aromatics** 

File ID

H015298.D

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 46100 64800	2500 2500 2500 7500	ug/kg U ug/kg U ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	93% 106% 99% 96%		75-125% 75-125% 72-137% 68-125%



Ti - Indianta value avande alibeation sanca

NAF

Client Sample ID: 011-04-MP-05N-S-38'-Q2

Lab Sample ID:

F12178-6

4-Bromofluorobenzene

17060-07-0 1,2-Dichloroethane-D4

Matrix:

SO - Soil

Method: Project:

Run #1 Run #2

460-00-4

SW846 8260B

NAS Whiting Field CTO-0011

DF

1

Date Sampled: 01/30/02

Date Received: 01/31/02 Percent Solids: 91.9

Rv	Pren Date	Prep Batch	Analytical Batch

n/a

72-137%

68-125%

n/a

VH495

File ID

H015300.D

Purgeable Aromatics										
CAS No.	Compound	Result	RL	Units	Q	Qual				
71-43-2	Benzene	3.6	5.4	ug/kg	J	<				
108-88-3	Toluene	38.0	5.4	ug/kg	=					
100-41-4	Ethylbenzene	19.9	5.4	ug/kg						
1330-20-7	Xylene (total)	101	16	ug/kg	=					
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Liı	nits					
1868-53-7	Dibromofluoromethane	94%		75-	125%					
2037-26-5	Toluene-D8	100%		75	125%					

103%

98%

Analyzed

02/08/02



B = Indicates analyte found in associated method blank

Client Sample ID: 011-04-MP-05N-S-66'-Q2

Lab Sample ID:

F12178-7

Matrix:

SO - Soil

Method: Project:

Run #2

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 92.2

٠							m m . 1	A 142 1 TO - 4 - 1.	
		File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch	
				-			, -	377740E	
	Run #1	H015306.D	50	02/08/02	NAF	n/a	n/a	VH495	
	Kun # 1	11013300.13	20	02.00.0=					

### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q	Qual
71-43-2	Benzene	ND	300	ug/kg U	
108-88-3	Toluene	1170	300	ug/kg =	
100-41-4	Ethylbenzene	313	300	ug/kg =	
1330-20-7	Xylene (total)	703	890	ug/kg J	<
CAS No.	Surrogate Recoveries	Run#1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	104%		75-125%	
2037-26-5	Toluene-D8	100%		75-125%	
460-00-4	4-Bromofluorobenzene	103%		72-137%	
17060-07-0	1,2-Dichloroethane-D4	92%		68-125%	

cmo 6/26/02

Client Sample ID: 011-04-MP-30E-S-18'-Q2

Lab Sample ID:

F12178-8

Matrix:

SO - Soil

Method:

Project:

SW846 8260B NAS Whiting Field CTO-0011 **Date Sampled:** 01/30/02

Date Received: 01/31/02

Q

Percent Solids: 89.8

Prep Date	Prep Batch	<b>Analytical Batch</b>

H015303.D

File ID

DF 500 Analyzed 02/08/02

Вy NAF

n/a

n/a

VH495

Run #1 Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units
71-43-2	Benzene	ND	2400	ug/kg

Toluene 108-88-3 Ethylbenzene 100-41-4 Xylene (total) 1330-20-7

17060-07-0

Surrogate Recoveries CAS No.

Dibromofluoromethane 1868-53-7 2037-26-5 Toluene-D8 4-Bromofluorobenzene 460-00-4

1,2-Dichloroethane-D4

ug/kg ND 2400 ug/kg ND 2400 73600 2400 ug/kg = ug/kg 168000 7100

Run#2 Limits Run# 1 75-125%

94% 120% 75-125% 72-137% 104% 68-125% 99%

omus 6/26/02

Client Sample ID: 011-04-MP-30E-S-43'-Q2

Lab Sample ID:

F12178-9

Matrix: Method:

Project:

SO - Soil

SW846 8260B NAS Whiting Field CTO-0011 Date Sampled: 01/30/02

Date Received: 01/31/02

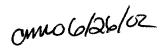
Percent Solids: 89.0

		***	A I	10	Dron Data	Prep Batch	Analytical Batch
	File ID	DF	Analyzed	БУ	Prep Date		•
Run #1 a	H015307.D	50	02/08/02	NAF	n/a	n/a	VH495

Run #2

Purgeable A	romatics					62.
CAS No.	Compound	Result	RL	Units	Q	Code
71-43-2	Benzene	ND	270	ug/kg		
108-88-3	Toluene	94.2	270	ug/kg		<
100-41-4	Ethylbenzene	103	270	ug/kg	J	<
1330-20-7	Xylene (total)	238	800	ug/kg	J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	92%		75-1	25%	
2037-26-5	Toluene-D8	104%		75-1	25%	
460-00-4	4-Bromofluorobenzene	105%		72-1	137%	
17060-07-0	1,2-Dichloroethane-D4	92%		68-1	125%	

<sup>(</sup>a) Dilution required due to matrix interference (non-target analytes present above calibration range).



Client Sample ID: 011-04-POSTEB-W-01-Q2

Lab Sample ID:

F12178-10

Matrix:

AQ - Field Blank Soil

DF

1

SW846 8021B

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: n/a

Method: Project:

NAS Whiting Field CTO-0011

n/a

By

RM

Analyzed

02/05/02

Prep Batch Prep Date

**Analytical Batch** 

GEF518 n/a

Run#1 Run #2

**Purgeable Aromatics** 

File ID

EF016556.D

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylenes (total)	ND ND ND ND	1.0 1.0 1.0 3.0	ug/l U ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0 98-08-8	1-Chloro-4-fluorobenzene aaa-Trifluorotoluene	108 <b>%</b> 107 <b>%</b>		80-120% 70-127%

mio 6/28/02

Client Sample ID: 011-04-TRIPB-W-01-Q2

Lab Sample ID:

F12178-11

Matrix:

AQ - Trip Blank Soil

DF

1

Method: Project:

SW846 8021B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: n/a

**Analytical Batch Prep Batch Prep Date** 

Run #1

File ID EF016557.D Analyzed 02/05/02

By RM

n/a

n/a

GEF518

Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylenes (total)	ND ND ND ND	1.0 1.0 1.0 3.0	ug/l U ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0 98-08-8	1-Chloro-4-fluorobenzene aaa-Trifluorotoluene	102% 106%		80-120% 70-127%

cmno 6/26/02

Client Sample ID: 011-04-PREEB-W-02-Q2

Lab Sample ID:

F12221-1

Matrix:

AQ - Field Blank Soil

Method: Project:

SW846 8021B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: n/a

					- D.	Deen Potch	Analytical Batch
Run #1	File ID EF016568.D	<b>DF</b> 1	<b>Analyzed</b> 02/06/02	By RM	Prep Date n/a	Prep Batch n/a	GEF519
Run #2							

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l U ug/l ug/l ug/l
108-88-3	Toluene	ND	1.0	
100-41-4	Ethylbenzene	ND	1.0	
1330-20-7	Xylenes (total)	ND	3.0	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	95%		80-120%
98-08-8	aaa-Trifluorotoluene	101%		70-127%



By

NAF

n/a

Client Sample ID: 011-04-MP-30E-S-72'-Q2

Lab Sample ID:

F12221-2

DF

1

Matrix:

SO - Soil

Method:

SW846 8260B

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 93.8

Project:

NAS Whiting Field CTO-0011

Prep Batch **Prep Date** 

n/a

**Analytical Batch** 

VH496

Run #1 Run #2

## **Purgeable Aromatics**

File ID

H015324.D

CAS No.	Compound	Result	RL	Units Q	Cote
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 11:5 4.7 15:2	5.5 5.5 5.5 16	ug/kg () ug/kg = ug/kg J ug/kg J	<b>&lt;</b>
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	99% 98% 103% 100%	·	75-125% 75-125% 72-137% 68-125%	

Analyzed

02/11/02



Client Sample ID: 011-04-BKGD-S-22'-Q2

Lab Sample ID:

F12221-3

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

<u></u>					<b>5 5</b> 4	Des Datah	Analytical Batch
Run #1	<b>File ID</b> K007798.D	<b>DF</b> 50	<b>Analyzed</b> 02/08/02	By NAF	Prep Date n/a	Prep Batch n/a	VK273
Run #2							

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene	ND ND 413	270 270 270	ug/kg U ug/kg U ug/kg =
1330-20-7	Xylene (total)	1560	800	ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		75-125%
2037-26-5	Toluene-D8	107%		75-125%
460-00-4	4-Bromofluorobenzene	113%		72-137%
17060-07-0	1,2-Dichloroethane-D4	97%		68-125%



Client Sample ID: 011-04-BKGD-S-43'-Q2

Lab Sample ID:

F12221-4 SO - Soil

**Date Sampled:** 02/04/02 Date Received: 02/05/02

Matrix: Method:

SW846 8260B

Project:

NAS Whiting Field CTO-0011

Percent Solids: 85.3

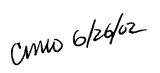
DF Analyzed By **Prep Date** File ID NAF n/a 50 02/08/02 Run #1 K007799.D

Prep Batch n/a

**Analytical Batch** VK273

Run #2

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 3860 7310 21600	250 250 250 750	ug/kg = ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	94% 110% 110% 90%		75-125% 75-125% 72-137% 68-125%



Client Sample ID: 011-04-BKGD-S-72'-Q2

Lab Sample ID:

F12221-5

Matrix:

SO - Soil

Method: Project:

SW846 8260B NAS Whiting Field CTO-0011 Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 93.4

L							
Run #1	File ID K007800.D	<b>DF</b> 50	Analyzed 02/08/02	By NAF	<b>Prep Date</b> n/a	Prep Batch n/a	Analytical Batch VK273

Run #2

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 6740 3700 11400	290 290 290 860	ug/kg
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	97% 107% 114% 93%		75-125% 75-125% 72-137% 68-125%



Client Sample ID: 011-04-MP-20S-S-18'-Q2

Lab Sample ID: Matrix: Method:

Project:

F12221-6 SO - Soil

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02 Date Received: 02/05/02

Percent Solids: 85.7

Run #1	File ID H015325.D	<b>DF</b> 50	Analyzed 02/11/02	By NAF	Prep Date n/a	Prep Batch n/a	Analytical Batch VH496	
Run #2								_

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 7210 5270	230 230 230 680	ug/kg U ug/kg U ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	97% 101% 103% 100%		75-125 % 75-125 % 72-137 % 68-125 %



Client Sample ID: 011-04-MP-20S-S-43'-Q2

Lab Sample ID:

F12221-7

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

	File ID	DF	Analyzed 02/08/02	By NAF	Prep Date	Prep Batch	Analytical Batch VK273	
Run #1	K007795.D	1	02/00/02	11111				
Run #2								

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 21-1 19:3	5.2 5.2 5.2 16	ug/kg U ug/kg U ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	94% 107% 120% 92%		75-125% 75-125% 72-137% 68-125%



Lab Sample ID:

Client Sample ID: 011-04-MP-20S-S-72'-Q2

Matrix:

F12221-8 SO - Soil

Method: Project:

SW846 8260B NAS Whiting Field CTO-0011 Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run#1	K007815.D	1	02/12/02	NAF	n/a	n/a	VK274
Run #2							

Purgeable A	romatics				and
CAS No.	Compound	Result	RL	Units Q	Cude
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND 6.1 1.1 5.7	5.7 5.7 5.7 17	ug/kg ¼ ug/kg = ug/kg J ug/kg J	< <
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	96% 194% 111% 101%		75-125% 75-125% 72-137% 68-125%	

mo6/26/02

By

NAF

Client Sample ID: 011-04-MP-20S-S-100'-Q2

Lab Sample ID:

Matrix:

F12221-9

Method:

SO - Soil

File ID

K007796.D

SW846 8260B

NAS Whiting Field CTO-0011

DF

1

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

n/a

**Analytical Batch** Prep Batch Prep Date

VK273 n/a

Run#1 Run #2

Project:

## **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q	Qual
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 2.9 3.0	5.2 5.2 5.2 15	ug/kg () ug/kg () ug/kg J ug/kg J	<b>&lt;</b>
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	97% 105% 120% 100%		75-125% 75-125% 72-137% 68-125%	

Analyzed

02/08/02

cmo 6/26/02

Client Sample ID: 011-04-POSTEB-W-02-Q2

Lab Sample ID:

Matrix:

F12221-10 AQ - Field Blank Soil

DF

1

Method:

SW846 8021B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: n/a

**Analytical Batch** 

Run #1

File ID EF016569.D

Analyzed 02/06/02

By RM **Prep Date** n/a

**Prep Batch** n/a

**GEF519** 

Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l ug/l ug/l ug/l
108-88-3	Toluene	ND	1.0	
100-41-4	Ethylbenzene	ND	1.0	
1330-20-7	Xylenes (total)	ND	3.0	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	104%		80-120%
98-08-8	aaa-Trifluorotoluene	103%		70-127%

CMO 6/20/02

Client Sample ID: 011-04-TRIPB-W-02-Q2

Lab Sample ID:

F12221-11

Matrix:

Run #2

AQ - Trip Blank Water

Method: Project:

SW846 8021B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: n/a

**Analytical Batch Prep Batch Prep Date** 

File ID EF016570.D Run #1

DF 1

By Analyzed RM 02/06/02

n/a

n/a

**GEF519** 

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylenes (total)	ND ND ND ND	1.0 1.0 1.0 3.0	ug/l Ug/l ug/l V
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0 98-08-8	1-Chloro-4-fluorobenzene aza-Trifluorotoluene	93 <b>%</b> 100%		80-120% 70-127%



Client Sample ID: 011-04-PREEB-W-01-Q3

Lab Sample ID:

F13055-1

Matrix:

AQ - Field Blank Soil

Method: Project:

SW846 8021B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02 Percent Solids: n/a

Pren Date	Pren Batch	Analytical Batch

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	CD029482.D	1	05/07/02	RA	n/a	n/a	GCD1149
Run #2	CD029460.D	1	05/06/02	RA	n/a	n/a	GCD1148

**Purge Volume** Run #1 5.0 ml 5.0 ml Run #2

CAS No.	Compound	Result	RL U	Units Q
71-43-2· 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylenes (total)	ND ND ND ND	1.0 u 1.0 u	1g/1 U 1g/1 J 1g/1 J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0 98-08-8	1-Chloro-4-fluorobenzene aaa-Trifluorotoluene	93 <b>%</b> 96 <b>%</b>	85% 88%	80-120 <i>%</i> 70-127 <i>%</i>



Client Sample ID: 011-04-BKGD-S-22'-Q3

Lab Sample ID:

F13055-2

Matrix: Method: SO - Soil SW846 8260B

Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 04/29/02

Date Received: 05/01/02 Percent Solids: 89.6

**Analytical Batch** By **Prep Date Prep Batch** DF Analyzed File ID VH545 NAF n/a n/a Run#1 05/06/02 H016357.D 1 VH546 n/a n/a H016384.D 05/07/02 NAF Run #2 1

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.85 g	5.0 ml	100 ul
Run #2	4.85 g	5.0 ml	50.0 ul

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 15600 * 41600 *	290 580	ug/kg U ug/kg U ug/kg = ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	98 <b>%</b> 11 <b>9%</b> 120% 108%	99% 112% 105% 106%	75-125% 75-125% 72-137% 68-125%

### (a) Result is from Run# 2

Chia 920/02

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-43'-Q3

Lab Sample ID:

F13055-3

Matrix:

SO - Soil

SW846 8260B

**Date Sampled:** 04/29/02

Date Received: 05/01/02

Percent Solids: 94.4

**Prep Date** 

n/a

Method: Project:

NAS Whiting Field CTO-0011

DF

1

Prep Batch n/a

**Analytical Batch** VH545

Run #1 Run #2

**Initial Weight** 

3.70 g

File ID

H016358.D

Final Volume 5.0 ml

**Methanol Aliquot** 

By

NAF

Run#1 Run #2

100 ul

Analyzed

05/06/02

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q	code
71-43-2	Benzene	NĐ	360	ug/kg ∪	
108-88-3	Toluene	290	360	ug/kg J	<
100-41-4	Ethylbenzene	2020	360	ug/kg =	
1330-20-7	Xylene (total)	8790	1100	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	99%		75-125%	
2037-26-5	Toluene-D8	100%		75-125%	
460-00-4	4-Bromofluorobenzene	103%		<b>72-137%</b>	
17060-07-0	1,2-Dichloroethane-D4	105%		68-125%	

cmix 6/26/02

By

NAF

**Methanol Aliquot** 

Client Sample ID: 011-04-BKGD-S-72'-Q3

File ID

H016385.D

Lab Sample ID: Matrix:

F13055-4

SO - Soil SW846 8260B **Date Sampled:** 04/29/02 Date Received: 05/01/02

Method: Project:

DF

1

Percent Solids: 93.1

NAS Whiting Field CTO-0011

**Prep Batch Analytical Batch Prep Date** n/a VH546 n/a

Run #1 Run #2

Initial Weight **Final Volume** 5.0 ml

Run #1 5.10 g 10.0 ul

Analyzed

05/07/02

Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	2600	ug/kg U
108-88-3	Toluene	72000	2600	ug/kg =
100-41-4	Ethylbenzene	44400	2600	ug/kg =
1330-20-7	Xylene (total)	147000	<b>790</b> 0	ug/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		75-125%
2037-26-5	Toluene-D8	108%		75-125%
460-00-4	4-Bromofluorobenzene	113%		72-137%
17060-07-0	1,2-Dichloroethane-D4	103%		68-125%

ome 6/26/a

Client Sample ID: 011-04-MP-30E-S-18'-Q3

Lab Sample ID:

F13055-5

Matrix: Method: Project:

SO - Soil SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 87.6

**Analytical Batch Prep Date Prep Batch** By Analyzed File ID DF VH545 n/a NAF Run #1 H016360.D 1 05/06/02 n/a

Run #2

**Methanol Aliquot Final Volume Initial Weight** 5.0 ml 100 ul Run #1 4.80 g

Run #2

Purgeable A	romatics				Qual
CAS No.	Compound	Result	RL	Units Q	Cirle
71-43-2	Benzene	ND	300	ug/kg U	
108-88-3	Toluene	124	300	ug/kg J	<
100-41-4	Ethylbenzene	797	300	ug/kg =	
1330-20-7	Xylene (total)	499	890	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s ·
1868-53-7	Dibromofluoromethane	100%	6	75-12	5%
2037-26-5	Toluene-D8	104%		75-12	5%
460-00-4	4-Bromofluorobenzene	103%		72-13	7%
17060-07-0	1,2-Dichloroethane-D4	108%		68-12	5%

emia 6/20/02

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13055-6

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02 Percent Solids: 93.9

**Prep Batch** Prep Date

Run #1

File ID H016376.D DF 1

Analyzed 05/07/02

By NAF

n/a

n/a

**Analytical Batch** 

VH546

Run #2

**Initial Weight** 

Run #1

4.17 g

Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q	Code
71-43-2	Benzene	ND 2.9	6.4 6.4	ug/kg U ug/kg J	<
108-88-3 100-41-4	Toluene Ethylbenzene	ND	6.4	ug/kg U	
1330-20-7	Xylene (total)	ND	19	ug/kg (A	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	95%		75-125%	
2037-26-5	Toluene-D8	110%		75-125%	
460-00-4	4-Bromofluorobenzene	108%		72-137%	
17060-07-0	1,2-Dichloroethane-D4	90%		68-125%	

umo dedo-

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13055-7

Matrix:

AQ - Field Blank Soil

DF

1

Method: Project:

SW846 8021B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: n/a

70-127%

**Analytical Batch** 

Run #1 Run #2 File ID CD029485.D

By RA

Analyzed

05/07/02

**Prep Date** n/a

**Prep Batch** n/a

GCD1149

**Purge Volume** 

aaa-Trifluorotoluene

Run #1

5.0 ml

Run #2

98-08-8

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylenes (total)	ND ND ND ND	1.0 1.0 1.0 3.0	ug/l Ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	ï
352-33-0	1-Chloro-4-fluorobenzene	94%		80-120	)%

anno e/20/02

Client Sample ID: 011-04-PREEB-W-02-Q3

Lab Sample ID:

F13055-8

Matrix:

AQ - Field Blank Soil

1

Method: Project:

SW846 8021B NAS Whiting Field CTO-0011 **Date Sampled: 04/30/02** Date Received: 05/01/02

Percent Solids: n/a

DF Analyzed File ID

Run #1 CD029486.D 05/07/02

By RA Prep Date n/a n/a

**Prep Batch** 

**Analytical Batch** GCD1149

Run #2

**Purge Volume** 

Run #1

5.0 ml

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l Ug/l ug/l
108-88-3	Toluene	ND	1.0	
100-41-4	Ethylbenzene	ND	1.0	
1330-20-7	Xylenes (total)	ND	3.0	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		80-120%
98-08-8	aaa-Trifluorotoluene	97%		70-127%

Como 6/28/02

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13055-9

Matrix:

SO - Soil

SW846 8260B

Date Sampled: 04/30/02

Date Received: 05/01/02° Percent Solids: 93.7

Method: Project:

NAS Whiting Field CTO-0011

Run #1

File ID H016364.D

17060-07-0 1,2-Dichloroethane-D4

Analyzed 05/06/02

By NAF **Prep Date** n/a

68-125%

**Prep Batch** n/a

**Analytical Batch** VH545

Run #2

**Final Volume Initial Weight** 

**Methanol Aliquot** 

Run #1 4.01 g 5.0 ml

DF

1

100 ul

Run #2

Purgeable A	Aromatics	-				Qual
CAS No.	Compound	Result	RL	Units	Q	cale
71-43-2	Benzene	ND	330	ug/kg	u	
108-88-3	Toluene	594	330	ug/kg		
100-41-4	Ethylbenzene	324	330	ug/kg	J	<
1330-20-7	Xylene (total)	<b>95</b> 9	1000	ug/kg	J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Liı	nits	
1868-53-7	Dibromofluoromethane	97%		75-	125%	
2037-26-5	Toluene-D8	100%		75-	125%	
460-00-4	4-Bromofluorobenzene	102%		72-	137%	

Cmo 6/26/02

Client Sample ID: 011-04-MP-FD1-S-100'-Q3

Lab Sample ID:

F13055-10

SO - Soil

Date Sampled: 04/30/02 Date Received: 05/01/02

SW846 8260B

Percent Solids: 91.3

Method: Project:

Matrix:

NAS Whiting Field CTO-0011

Run #1 a

File ID H016365.D

Analyzed DF 05/06/02 1

By NAF **Prep Date** n/a

**Prep Batch** n/a

**Analytical Batch** VH545

Run #2

Initial Weight

Final Volume

**Methanol Aliquot** 

4.58 g Run #1

5.0 ml

100 ul

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	NÐ NÐ ND NÐ	300 300 300 900	ug/kg ug/kg ug/kg ug/kg
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	96% 101% 101% 105%		75-125% 75-125% 72-137% 68-125%

<sup>(</sup>a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

cm06/26/02

Client Sample ID: 011-04-MP-05N-S-18'-Q3

Lab Sample ID:

F13055-11

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 87.6

**Analytical Batch** Prep Batch **Prep Date** DF Analyzed By File ID VH545 05/06/02 NAF n/a n/a H016356.D 1 Run #1 2

Run #2

**Methanol Aliquot Initial Weight Final Volume** 5.0 ml 100 ul Run #1 5.57 g

Run #2

romatics					and
Compound	Result	RL	Units	Q	Cide
Benzene	ND	260			
Toluene	ND	260			
Ethylbenzene	225	260	ug/kg	J	~
Xylene (total)	ND	770	ug/kg	U	
Surrogate Recoveries	Run# 1	Run# 2	Li	mits	
Dibromofluoromethane	101%		75	-125%	
Toluene-D8	102%		75	-125%	
4-Bromofluorobenzene	100%		72	-137%	
1,2-Dichloroethane-D4	108%		68	-125%	
	Compound  Benzene Toluene Ethylbenzene Xylene (total)  Surrogate Recoveries  Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	Compound Result  Benzene ND Toluene ND Ethylbenzene 225 Xylene (total) ND  Surrogate Recoveries Run# 1  Dibromofluoromethane 101% Toluene-D8 4-Bromofluorobenzene 100%	Compound Result RL  Benzene ND 260 Toluene ND 260 Ethylbenzene 225 260 Xylene (total) ND 770  Surrogate Recoveries Run# 1 Run# 2  Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 100%	Compound         Result         RL         Units           Benzene         ND         260         ug/kg           Toluene         ND         260         ug/kg           Ethylbenzene         225         260         ug/kg           Xylene (total)         ND         770         ug/kg           Surrogate Recoveries         Run# 1         Run# 2         Lin           Dibromofluoromethane         101%         75           Toluene-D8         102%         75           4-Bromofluorobenzene         100%         72	Result RL Units Q  Benzene Toluene Ethylbenzene Xylene (total)  Surrogate Recoveries  Run# 1  Run# 2  Limits  Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene  Result RL Units Q  ug/kg U  ug/kg U  T770 ug/kg U  Run# 2  Limits  75-125% 75-125% 75-125% 72-137%

<sup>(</sup>a) Methanol extract analysis required due to matrix interference (non-target analytes present above calibration range).

como 6/20/02

Client Sample ID: 011-04-MP-05N-S-38'-Q3

Lab Sample ID:

F13055-12

Matrix:

SO - Soil

Method:

SW846 8260B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 90.4

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	H016377.D	1	05/07/02	NAF	n/a	n/a	VH546

Run #2

**Initial Weight** 

Run #1

4.50 g

Run #2

Purgeable A	romaucs
CAS No.	Compound

71-43-2	Benzene
108-88-3	Toluene
100-41-4	Ethylbenzene
1330-20-7	Xylene (total)

CAS No.	Surrogate Recoveries
1868-53-7	Dibromofluoromethane
2037-26-5	Toluene-D8
460-00-4	4-Bromofluorobenzene
17060-07-0	1,2-Dichloroethane-D4

	Result	RL	Units Q	Quel
0000	ND	6.2	ug/kg U	
	6.4	6.2	ug/kg =	
3000	11.8	6.2	ug/kg =	
2000000	14.6	18	ug/kg J	<
	Run# 1	Run# 2	Limits	
30	101%		75-125%	
3	105%		75-125%	
9	105%		72-137%	

68-125%

104%

Como Calactor

Tadiasa andre amanada antibuntian maman

Client Sample ID: 011-04-MP-05N-S-66'-Q3

Lab Sample ID:

Matrix:

F13055-13

SO - Soil

SW - Sou SW 846 8260B

Method: Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02 Percent Solids: 90.5

Prep Date Prep Batch Analytical Batch

By Analyzed File ID DF VH546 n/a NAF n/a Run #1 H016386.D 1 05/07/02 VH547 1 05/08/02 NAF n/a n/a Run #2 H016403.D

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.90 g	5.0 ml	10.0 ul
Run #2	4.90 g	5.0 ml	5.0 ul

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL 1	Units Q
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	5460 121000 * 31500 74000	5600 1 2800 1	1g/kg = 1g/kg = 1g/kg = 1g/kg =
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	100% 108% 124% 105%	98% 103% 129% 98%	75-125% 75-125% 72-137% 68-125%

(a) Result is from Run# 2

cmio 6/26/02

N - Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-18'-Q3

Lab Sample ID:

F13055-14

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 89.0

Esta ID DE Analyzad Ry Prop Da	Pr	
		:

File ID H016368.D Run #1

DF 1

Analyzed 05/06/02

NAF

n/a n/a

**Analytical Batch** Prep Batch

VH545

Run #2

**Final Volume Initial Weight** 

**Methanol Aliquot** 

Run #1

5.15 g

5.0 ml

100 ul

Run #2

Purgeable Aromatics					
CAS No.	Compound	Result	RL	Units Q	Code
71-43-2	Benzene	ND	270	ug/kg i	
108-88-3	Toluene	187	270	ug/kg J	4
100-41-4	Ethylbenzene	5000	270	ug/kg エ	P
1330-20-7	Xylene (total)	7640	820	ug/kg \( \mathcal{Z} \)	P
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7	Dibromofluoromethane	95%		75-125%	
2037-26-5	Toluene-D8	106%	8	75-125%	
460-00-4	4-Bromofluorobenzene	103%		72-137%	
17060-07-0	1,2-Dichloroethane-D4	106%		68-125%	

CMW 6/26/02

Client Sample ID: 011-04-MP-10W-S-43'-Q3

Lab Sample ID:

F13055-15

Matrix: Method: SO - Soil SW846 8260B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 94.0

**Analytical Batch Prep Date Prep Batch** 

Run #1

File ID H016378.D DF Analyzed 1 05/07/02

By NAF

n/a

n/a

VH546

Run #2

**Initial Weight** 

Run #1

3.97 g

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	6.7	ug/kg	ц
108-88-3	Toluene	31.4	6.7	ug/kg	=
100-41-4	Ethylbenzene	9.2	6.7	ug/kg	~
1330-20-7	Xylene (total)	24.5	20	ug/kg	Z
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lir	nits
1868-53-7	Dibromofluoromethane	102%		75-	125%
2037-26-5	Toluene-D8	104%		75-	125%
460-00-4	4-Bromofluorobenzene	119%		72-	137%
17060-07-0	1,2-Dichloroethane-D4	107%		68-	125%

Como Gredor

Client Sample ID: 011-04-MP-10W-S-72'-Q3

Lab Sample ID:

F13055-16

Matrix: Method: SO - Soil SW846 8260B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 92.2

File ID Run #1 H01638 Run #2 H01640		Analyzed 05/07/02 05/08/02	By NAF NAF	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch VH546 VH547
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	Initial Weight	Final Volume	Methanol Aliquot	
Run #1	4.15 g	5.0 ml	10.0 ul	l
Run #2	4.15 g	5.0 ml	5.0 ul	

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL U	nits Q
71-43-2	Benzene	8700	6	g/kg =
108-88-3	Toluene	220000 *	č.	g/kg 🗅
100-41-4	Ethylbenzene	55700	9.	g/kg 👱
1330-20-7	Xylene (total)	127000	9800 u	g/kg 💍
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	98%	75-125%
2037-26-5	Toluene-D8	108%	104%	75-125%
460-00-4	4-Bromofluorobenzene	120%	109%	72-137%
17060-07-0	1,2-Dichloroethane-D4	108%	104%	68-125%

(a) Result is from Run# 2

como Gredor

Client Sample ID: 011-04-MP-FD2-S-100'-Q3

Lab Sample ID:

F13055-17

Matrix: Method:

Project:

SO - Soil

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02 Date Received: 05/01/02

Percent Solids: 89.3

Run #1	File ID H016388.D	<b>DF</b> 1	<b>Analyzed</b> 05/07/02	By NAF	Prep Date n/a	Prep Batch n/a	Analytical Batch VH546
L							

Run #2

Initial Weight Final Volume **Methanol Aliquot** 5.0 ml 10.0 ul 4.91 g Run #1 Run #2

Purgeable	Arom	atics
-----------	------	-------

CAS No.	Compound	Result	RL	Units Q	Quel
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 62300 53600	2900 2900 2900 8600	ug/kg U ug/kg U ug/kg = 1	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	5
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	98% 107% 120% 102%		75-125 75-125 72-137 68-125	5% 7%



Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13055-18

Matrix:

AQ - Field Blank Soil

Method:

SW846 8021B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: n/a

**Analytical Batch** Prep Batch **Prep Date** File ID DF Analyzed By GCD1149 CD029487.D 05/07/02 RA n/a n/a 1 Run #1

Run #2

**Purge Volume** 

Run #1

5.0 ml

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	NÐ	1.0	ug/l <b>U</b>
108-88-3	Toluene	ND	1.0	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
1330-20-7	Xylenes (total)	ND	3.0	ug/l ¥
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	92%		80-120%
98-08-8	aaa-Trifluorotoluene	97%		70-127%

Como 6/20/02

By

RA

Analyzed

05/07/02

Client Sample ID: 011-04-TRIPB-W-01-Q3

Lab Sample ID:

F13055-19

Matrix:

AQ - Trip Blank Soil

DF

1

Method: Project:

SW846 8021B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

**Prep Date** 

n/a

Date Received: 05/01/02 Percent Solids: n/a

**Prep Batch** 

**Analytical Batch** 

n/a

GCD1149

Run #1 Run #2

**Purge Volume** 

CD029483.D

Run #1

5.0 ml

File ID

Run #2

**Purgeable Aromatics** 

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l (X
108-88-3	Toluene	ND	1.0	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l (y
1330-20-7	Xylenes (total)	ND	3.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	91%		80-120%
98-08-8	aaa-Trifluorotoluene	95%		70-127%

(ma 6/26/02

Client Sample ID: 011-04-MP-20S-S-18'-Q3

File ID

H016389.D

H016405.D

Lab Sample ID:

Matrix:

Method: Project:

Run #1

Run #2

F13066-2

SO - Soil

SW846 8260B NAS Whiting Field CTO-0011

DF

1

1

Date Sampled: 05/01/02

Date Received: 05/02/02

Percent Solids: 87.8

**Prep Batch Analytical Batch** 

**Prep Date** By n/a VH546 NAF n/a VH547 n/a n/a NAF

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.45 g	5.0 ml	100 ul
Run #2	5.45 g	5.0 ml	50.0 ul

Purgeable A	romatics				Jalial Wual	What Cude
CAS No.	Compound	Result	RL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND 13300 * 16300	260 260 520 780	ug/kg ug/kg 'ug/kg ug/kg	U U = =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lin	nits	
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	99% 110% 121% 105%	98% 104% 110% 100%	75. 72.	-125% -125% -137% -125%	

Analyzed

05/07/02

05/08/02

(a) Result is from Run# 2

mo 6/26/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13066-3

Matrix:

SO - Soil

Method: Project:

SW846 8260B

05/01/02 Date Sampled: 05/02/02

Date Received: Percent Solids: 91.1

NAS Whiting Field CTO-0011

File ID H016380.D Run #1

DF 1

Analyzed 05/07/02

By NAF Prep Date n/a

\_

**Prep Batch** n/a

**Analytical Batch** 

VH546

Run #2

**Initial Weight** 

4.60 g

Run #1

Run #2

**Purgeable Aromatics** 

Units O Result RL CAS No. Compound 6.0 ug/kg U ND 71-43-2 Benzene 6.0 ug/kg U ND 108-88-3 Toluene 6.0 ug/kg 24.0 Ethylbenzene 100-41-4 18 ug/kg 39.7 1330-20-7 Xylene (total)

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 2037-26-5 460-00-4 17060-07-0	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene 1,2-Dichloroethane-D4	100% 107% 108% 106%		75-125% 75-125% 72-137% 68-125%

ommo 6/26/02

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13066-4

Matrix:

SO - Soil

Method: Project:

SW846 8260B

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02 Date Received: 05/02/02

68-125%

Percent Solids: 93.2

D #1	File ID	DF 1	<b>Analyzed</b> 05/07/02	By NAF	Prep Date	Prep Batch n/a	Analytical Batch VH546
Run #1	H016390.D	1	03/07/02	MAT.	wa.	10 4	
I							

Run #2

Run #1	Initial Weight 4.78 g	Final Volume 5.0 ml	Methanol Aliquot 100 ul	
Run #2	•			

Purgeable A	romatics					Quel
CAS No.	Compound	Result	RL	Units	Q	Code
71-43-2	Benzene	ND	280	ug/kg		
108-88-3	Toluene	404	280	ug/kg	Ξ	_
100-41-4	Ethylbenzene	157	280	ug/kg	J	<
1330-20-7	Xylene (total)	367	840	ug/kg	J	<
CAS No.	Surrogate Recoveries	Run#1	Run# 2	Li	nits	
1868-53-7	Dibromofluoromethane	99%		75-	-125%	6
2037-26-5	Toluene-D8	103%		75-	-125%	6
460-00-4	4-Bromofluorobenzene	105%		72	-137%	6
400-00-4	4-DIAMONAGONA		8		1050	,



17060-07-0 1,2-Dichloroethane-D4

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13066-5

Matrix: Method:

Project:

AQ - Field Blank Water

SW846 8021B

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

Date Received: 05/02/02

Percent Solids: n/a

_								
ı	TE.	ile ID	DF	Analyzed	Bv	Prep Date	Prep Batch	Analytical Batch
1	-	AIC AD	~~	-	-,			CCD1147
lo	Run#1 C	:D029444.D	1	05/03/02	RM	n/a	n/a	GCD1147

Run #2

**Purge Volume** 

Run #1

5.0 ml

Run #2

#### **Purgeable Aromatics**

CAS No.	Compound	Result	RL	Units Q
71-43-2	Benzene	ND	1.0	ug/l
108-88-3	Toluene	ND	1.0	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
1330-20-7	Xylenes (total)	ND	3.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
352-33-0	1-Chloro-4-fluorobenzene	84%		80-120 %
98-08-8	aaa-Trifluorotoluene	91%		70-127 %

CMIN 6/25/02

Client Sample ID: 011-04-PREEB-W-01-Q1

Lab Sample ID:

F11289-1

Matrix:

AQ - Ground Water

Method:

EPA 8310 SW846 3510C

Project:

NAS Whiting Field CTO-0011

Date Sampled: 10/22/01 Date Received: 10/23/01

Percent Solids: n/a

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	EE006125.D	1	11/07/01	MRE	10/29/01	OP4081	GEE274

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.0	ug/l · U
208-96-8	Acenaphthylene	ND	4.0	ug/l
120-12-7	Anthracene	ND	2.0	ug/l
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l
218-01-9	Chrysene	ND	2.0	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l
206-44-0	Fluoranthene	ND	2.0	ug/l
86-73-7	Fluorene	ND	2.0	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l
91-20-3	Naphthalene	ND	2.0	ug/l
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l
85-01-8	Phenanthrene	ND	2.0	ug/l
129-00-0	Pyrene	ND	2.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	66%		33-141%
92-94-4	p-Terphenyl	66%		31-122%

mus 6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-22'-Q1

Lab Sample ID:

F11289-2

Matrix:

SO - Soil

Method: Project: EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/22/01 **Date Received:** 10/23/01

Date Received: 10/23/01 Percent Solids: 86.1

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 a EE006058.D 1 11/05/01 MRE 11/02/01 OP4113 GEE273

Run #2

Polynuclear	Aromatic Hydrocarbons				0.00
CAS No.	Compound	Result	RL	Units Q	Coole
83-32-9	Acenaphthene	ND	740	ug/kg U	
208-96-8	Acenaphthylene	ND	740	ug/kg	
120-12-7	Anthracene	ND	370	ug/kg	
56-55-3	Benzo(a)anthracene	ND	370	ug/kg 🕈	
50-32-8	Benzo(a)pyrene	68.7	74	ug/kg J	<
205-99-2	Benzo(b)fluoranthene	48.3	<i>7</i> 4	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	ND	74	ug/kg 4	_
207-08-9	Benzo(k)fluoranthene	39.7	74	ug/kg J	<b>&lt;</b>
218-01-9	Chrysene	ND	370	ug/kg 🗸	
53-70-3	Dibenzo(a,h)anthracene	ND	74	ug/kg U	
206-44-0	Fluoranthene	235	370	ug/kg J	<
86-73-7	Fluorene	ND	370	ug/kg U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	74	ug/kg	
91-20-3	Naphthalene	ND	370	ug/kg	
90-12-0	1-Methylnaphthalene	ND	370	ug/kg	
91-57-6	2-Methylnaphthalene	ND	370	ug/kg ♦	
85-01-8	Phenanthrene	144	370	ug/kg J	<
129-00-0	Pyrene	245	370	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	78%		37-158%	
92-94-4	p-Terphenyl	104%		59-149%	5

(a) All hits confirmed by spectral match using a diode array detector.

Cnuo 6/27/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-43'-Q1

Lab Sample ID: F11289-3
Matrix: SO - Soil
Method: EPA 8310 SW846 3550B

Date Sampled: 10/22/01 Date Received: 10/23/01 Percent Solids: 94.7

Project: NAS Whiting Field CTO-0011

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 a EE006059.D 1 11/05/01 MRE 11/02/01 OP4113 GEE273

Run #2

Polynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Coole		
83-32-9	Acenaphthene	ND	710	ug/kg U			
208-96-8	Acenaphthylene	ND	710	ug/kg			
120-12-7	Anthracene	ND	350	ug/kg			
56-55-3	Benzo(a)anthracene	ND	350	ug/kg 🔻			
50-32-8	Benzo(a)pyrene	71.6	71	ug/kg =	_		
205-99-2	Benzo(b)fluoranthene	48.8	71	ug/kg J	<		
191-24-2	Benzo(g,h,i)perylene	36.3	71	ug/kg J	<		
207-08-9	Benzo(k)fluoranthene	37,8	71	ug/kg J	<		
218-01-9	Chrysene	ND	350	ug/kg U			
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg U			
206-44-0	Fluoranthene	441	350	ug/kg =			
86-73-7	Fluorene	ND	350	ug/kg U	_		
193-39-5	Indeno(1,2,3-cd)pyrene	35,2	71	ug/kg J	<		
91-20-3	Naphthalene	ND	350	ug/kg 4			
90-12-0	1-Methylnaphthalene	ND	350	ug/kg U			
91-57-6	2-Methylnaphthalene	ND	350	ug/kg U			
85-01-8	Phenanthrene	342	350	ug/kg J			
129-00-0	Pyrene	356	350	ug/kg =			
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	89%		37-158%			
92-94-4	p-Terphenyl	104%		59-149%			

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

cmis 6/21/02

Client Sample ID: 011-04-MP-30E-S-30'-Q1

Lab Sample ID:

Matrix:

F11289-5

Method: Project:

SO - Soil

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011 Date Sampled: 10/22/01 Date Received: 10/23/01

Percent Solids: 90.4

DF File ID Run #1 a EE006085.D 1

Analyzed 11/06/01

By MRE **Prep Date** 11/02/01

**Prep Batch OP4113** 

**Analytical Batch GEE274** 

Run #2

Polynuclear	Aromatic Hydrocarbons				Class
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	ND	740	ug/kg U	
208-96-8	Acenaphthylene	ND	740	ug/kg U	
120-12-7	Anthracene	394	370	ug/kg 😑	
56-55-3	Benzo(a)anthracene	857	370	ug/kg =	
50-32-8	Benzo(a)pyrene	534	74	ug/kg =	
205-99-2	Benzo(b)fluoranthene	291	74	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	129	74	ug/kg =	
207-08-9	Benzo(k)fluoranthene	246	74	ug/kg =	
218-01-9	Chrysene	3300	370	ug/kg =	
53-70-3	Dibenzo(a,h)anthracene	39.9	74	ug/kg J	4
206-44-0	Fluoranthene	2280	370	ug/kg =	
86-73-7	Fluorene	306	370	ug/kg J	<
193-39-5	Indeno(1,2,3-cd)pyrene	171	74	ug/kg 🗦	
91-20-3	Naphthalene	ND	370	ug/kg <b>U</b>	
90-12-0	1-Methylnaphthalene	ND	370	ug/kg U	
91-57-6	2-Methylnaphthalene	ND	370	ug/kg U	
85-01-8	Phenanthrene	2040	370	ug/kg =	
129-00-0	Pyrene	1900	370	ug/kg =	
127-00-0	1 910110	-0000000000000000000000000000000000000	NY -	•	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	93%		37-158%	,
92-94-4	p-Terphenyl	121%		59-149%	•

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

como 6/21/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound 025

Client Sample ID: 011-04-MP-30E-S-18'-Q1

Lab Sample ID: Matrix: E11780\_/

F11289-4 SO - Soil

EPA 8310 SW846 3550B

**Date Sampled:** 10/22/01 **Date Received:** 10/23/01

Method: Project:

NAS Whiting Field CTO-0011

Percent Solids: 90.5

**Prep Batch Analytical Batch** Prep Date File ID DF Analyzed By **GEE274** MRE 11/02/01 OP4113 11/06/01 EE006084.D 1 Run #1 a Run #2

Polynuclear	Aromatic Hydrocarbons	•			chal
CAS No.	Compound	Result	RL	Units Q	Cixle
83-32-9	Acenaphthene	ND	720	ug/kg <b>U</b>	
208-96-8	Acenaphthylene	ND	720	ug/kg U	
120-12-7	Anthracene	370	360	ug/kg =	
56-55-3	Benzo(a)anthracene	910	360	ug/kg =	
50-32-8	Benzo(a)pyrene	516	72	ug/kg =	
205-99-2	Benzo(b)fluoranthene	30 <del>9</del>	72	ug/kg 🛫	
191-24-2	Benzo(g,h,i)perylene	130	72	ug/kg =	
207-08-9	Benzo(k)fluoranthene	252	72	ug/kg =	
218-01-9	Chrysene	3250	360	ug/kg =	
53-70-3	Dibenzo(a,h)anthracene	43.9	72	ug/kg J	<
206-44-0	Fluoranthene	2320	360	ug/kg 🤏	
86-73-7	Fluorene	262	360	ug/kg J	て
193-39-5	Indeno(1,2,3-cd)pyrene	186	72	ug/kg ⋍	
91-20-3	Naphthalene	ND	360	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg ♥	
85-01-8	Phenanthrene	1880	360	ug/kg =	
129-00-0	Pyrene	1940	360	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	101%	% *	37-158%	
92-94-4	p-Terphenyl	136%		59-149%	

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

CMD 6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

MRE

Client Sample ID: 011-04-MP-30E-S-43'-Q1

Lab Sample ID:

File ID

EE006083.D

F11289-6

DF

1

Matrix:

SO - Soil

EPA 8310 SW846 3550B

Date Received: 10/23/01

Date Sampled: 10/22/01

Percent Solids: 93.5

Method: Project:

NAS Whiting Field CTO-0011

**Prep Batch Analytical Batch Prep Date GEE274** 11/02/01 OP4113

Run #1 a Run #2

Polynuclear Aromatic Hydrocarbons						
CAS No.	Compound	Result	RL	Units Q	code	
83-32-9	Acenaphthene	ND	700	ug/kg <b>U</b>		
208-96-8	Acenaphthylene	ND	700	ug/kg		
120-12-7	Anthracene	ND	350	ug/kg		
56-55-3	Benzo(a)anthracene	ND	350	ug/kg 🗸		
50-32-8	Benzo(a)pyrene	43.9	70	ug/kg J	<	
205-99-2	Benzo(b)fluoranthene	33.8	<b>7</b> 0	ug/kg J	<	
191-24-2	Benzo(g,h,i)perylene	ND	70	ug/kg U		
207-08-9	Benzo(k)fluoranthene	ND	70	ug/kg		
218-01-9	Chrysene	ND	350	ug/kg		
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg 🗸		
206-44-0	Fluoranthene	242	350	ug/kg J	<	
86-73-7	Fluorene	ND	350	ug/kg 👢		
193-39-5	Indeno(1,2,3-cd)pyrene	ND	70	ug/kg 🐧		
91-20-3	Naphthalene	ND	350	ug/kg		
90-12-0	1-Methylnaphthalene	ND	350	ug/kg		
91-57-6	2-Methylnaphthalene	ND	350	ug/kg ♥		
85-01-8	Phenanthrene	153	350	ug/kg J	<	
129-00-0	Pyrene	204	350	ug/kg J	<	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	76%		37-158%		
92-94-4	p-Terphenyl	100%		59-149%		

Analyzed

11/06/01

Ome 6/27/ez

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

ND = Not detected

RL = Reporting Limit

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

MRE

Client Sample ID: 011-04-POSTEB-W-01-Q1

Lab Sample ID:

F11289-7

Matrix:

AQ - Ground Water

DF

1

Method:

EPA 8310 SW846 3510C

Project:

NAS Whiting Field CTO-0011

Analyzed

11/07/01

Date Sampled: Date Received:

**Prep Date** 

10/29/01

10/22/01

10/23/01

Percent Solids: n/a

Prep Batch	<b>Analytical Batch</b>
OP4081	GEE274

Run#1 Run #2

Polynuclear Aromatic Hydrocarbons

EE006126.D

File ID

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.4	ug/l <b>U</b>
208-96-8	Acenaphthylene	ND	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/l
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/l 🦋
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		33-141%
92-94-4	p-Terphenyl	77%		31-122%

CM106/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-30E-S-72'-Q1

Lab Sample ID:

F11298-3

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

**Date Sampled:** 10/23/01 **Date Received:** 10/24/01

Percent Solids: 92.2

Project: NAS Whiting Field CTO-0011

Run #1 a	File ID EE006063.D	DF 1	<b>Analyzed</b> 11/05/01	By MRE	Prep Date 11/02/01	Prep Batch OP4113	Analytical Batch GEE273	_
Run #2	22000003.2	•	11/05/01	MIKE	11/02/01	OP4113	GEE2/3	

Polynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Cide		
83-32-9	Acenaphthene	ND	730	ug/kg 🔾			
208-96-8	Acenaphthylene	ND	730	ug/kg			
120-12-7	Anthracene	ND	360	ug/kg			
56-55-3	Benzo(a)anthracene	ND	360	ug/kg			
50-32-8	Benzo(a)pyrene	ND	73	ug/kg			
205-99-2	Benzo(b)fluoranthene	ND	73	ug/kg			
191-24-2	Benzo(g,h,i)perylene	ND	73	ug/kg			
207-08-9	Benzo(k)fluoranthene	ND	73	ug/kg			
218-01-9	Chrysene	ND	360	ug/kg			
53-70-3	Dibenzo(a,h)anthracene	ND	73	ug/kg 🔻			
206-44-0	Fluoranthene	266	360	ug/kg J	(		
86-73-7	Fluorene	ND	360	ug/kg U	•		
193-39-5	Indeno(1,2,3-cd)pyrene	ND	73	ug/kg			
91-20-3	Naphthalene	ND	360	ug/kg			
90-12-0	1-Methylnaphthalene	ND	360	ug/kg			
91-57-6	2-Methylnaphthalene	ND	360	ug/kg			
85-01-8	Phenanthrene	213	360	ug/kg J	<		
129-00-0	Pyrene	212	360	ug/kg J	~		
	•		,	-5,5			
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	82%		37-158%			
92-94-4	p-Terphenyl	101%		59-149%			

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

cmo 6/27/02

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-72'-Q1

Lab Sample ID: F11298-4

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011 Date Sampled: 10/23/01 Date Received: 10/24/01

Percent Solids: 92.1

**Prep Batch Analytical Batch** File ID DF By Prep Date Analyzed 11/02/01 OP4113 **GEE273** Run #1 a EE006064.D MRE 1 11/05/01

Run #2

Polynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Cide		
83-32-9	Acenaphthene	ND	720	ug/kg U			
208-96-8	Acenaphthylene	ND	720	ug/kg			
120-12-7	Anthracene	ND	360	ug/kg			
56-55-3	Benzo(a)anthracene	ND	360	ug/kg			
50-32-8	Benzo(a)pyrene	ND	72	ug/kg			
205-99-2	Benzo(b)fluoranthene	ND	72	ug/kg			
191-24-2	Benzo(g,h,i)perylene	ND	72	ug/kg			
207-08-9	Benzo(k)fluoranthene	ND	72	ug/kg			
218-01-9	Chrysene	ND	360	ug/kg			
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg 🅊			
206-44-0	Fluoranthene	245	360	ug/kg J	<		
86-73-7	Fluorene	ND	360	ug/kg U			
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	ug/kg			
91-20-3	Naphthalene	ND	360	ug/kg			
90-12-0	1-Methylnaphthalene	ND	360	ug/kg			
91-57-6	2-Methylnaphthalene	ND	360	ug/kg ¥			
85-01 <b>-8</b>	Phenanthrene	203	360	ug/kg J	<		
129-00-0	Pyrene	197	360	ug/kg J	<		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	72%		37-158%			
92-94-4	p-Terphenyl	91%		59-149%			

(a) All hits confirmed by spectral match using a diode array detector.

CMUS 6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10N-S-18-Q1

Lab Sample ID:

F11298-5

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

Date Sampled: 10/23/01

Date Received: 10/24/01

Percent Solids: 87.2

Project:	NAS Whiting Field C10-001	ı
L		

D. 41 3	File ID	DF	<b>Analyzed</b> 11/06/01	By MRE	Prep Date 11/02/01	Prep Batch OP4113	Analytical Batch GEE274	
Run #1 <sup>a</sup> Run #2	EE006086.D	4	11/00/01	MKE	11/02/01	OF4115	GEE214	

Polynuclear	Aromatic Hydrocarbons				aual
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	1870	3000	ug/kg J	<
208-96-8	Acenaphthylene	ND	3000	ug/kg 🔾	
120-12-7	Anthracene	2320	1500	ug/kg ≥	
56-55-3	Benzo(a)anthracene	3220	1500	ug/kg ≠	
50-32-8	Benzo(a)pyrene	1450	300	ug/kg 💌	
205-99-2	Benzo(b)fluoranthene	749	300	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	257	300	ug/kg J	4
207-08-9	Benzo(k)fluoranthene	670	300	ug/kg =	
218-01-9	Chrysene	3750	1500	ug/kg =	
53-70-3	Dibenzo(a,h)anthracene	ND	300	ug∕kg 从	
206-44-0	Fluoranthene	12300	1500	ug/kg =	
86-73-7	Fluorene	1660	1500	ug/kg =	
193-39-5	Indeno(1,2,3-cd)pyrene	351	300	ug/kg =	
91-20-3	Naphthalene	ND	1500	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	1500	ug/kg j	
91-57-6	2-Methylnaphthalene	ND	1500	ug/kg ₩	
85-01-8	Phenanthrene	10700	1500	ug/kg 💌	
129-00-0	Pyrene	10200	1500	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	112%		37-158%	
92-94-4	p-Terphenyl	117%		59-149%	5

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

CILLO 6/57/ez

By

**MRE** 

Client Sample ID: 011-04-MP-10N-S-38-Q1

Lab Sample ID:

F11298-6

DF

1

Matrix:

SO - Soil

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 10/23/01

11/02/01

Date Received: 10/24/01

OP4113

Percent Solids: 90.2

**Analytical Batch Prep Date Prep Batch** 

**GEE274** 

Run #1 a Run #2

Method:

Project:

Polynuclear Aromatic Hydrocarbons

EE006087.D

File ID

Polynuclear Aromatic Hydrocarbons						
Compound	Result	RL	Units Q	Cede		
Acenaphthene	ND	720	ug/kg <b>U</b>			
Acenaphthylene	ND	720	ug/kg			
Anthracene	ND	360	ug/kg 🔰			
Benzo(a)anthracene	364	360	ug/kg =			
Benzo(a)pyrene	166	72	ug/kg ح			
Benzo(b)fluoranthene	94.1	72				
Benzo(g,h,i)perylene	36.2	XX		2		
Benzo(k)fluoranthene	96.6	72	ug/kg =			
Chrysene	312	360		Z		
Dibenzo(a,h)anthracene	ND	72	ug/kg 以			
Fluoranthene	1270	360	ug/kg =			
Fluorene	ND	360	ug/kg U			
Indeno(1,2,3-cd)pyrene	40.4	72	ug/kg J	<		
Naphthalene	ND	360	ug/kg <b>U</b>			
1-Methylnaphthalene	ND	360	ug/kg			
2-Methylnaphthalene	ND	360	ug/kg ♥			
Phenanthrene	961	360	ug/kg =			
Pyrene	1090	360	ug/kg =			
Surrogate Recoveries	Run# 1	Run# 2	Limits			
o-Terphenyl	86%		37-158%	ó		
p-Terphenyl	109%		59-149%	6		
	Compound  Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene 1-Methylnaphthalene 2-Methylnaphthalene Phenanthrene Pyrene  Surrogate Recoveries o-Terphenyl	Compound  Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluoranthene I270 Fluorene Indeno(1,2,3-cd)pyrene ND Indeno(1,2,3-cd)pyrene ND I-Methylnaphthalene ND I-Methylnaphthalene Phenanthrene Pyrene  Surrogate Recoveries  Run# 1  o-Terphenyl  RD  Result  Result  Result  Result  Result  Result  A	Compound         Result         RL           Acenaphthene         ND         720           Acenaphthylene         ND         720           Anthracene         ND         360           Benzo(a)anthracene         364         360           Benzo(a)pyrene         166         72           Benzo(b)fluoranthene         94.1         72           Benzo(g,h,i)perylene         36.2         72           Benzo(k)fluoranthene         96.6         72           Chrysene         312         360           Dibenzo(a,h)anthracene         ND         72           Fluoranthene         1270         360           Fluorene         ND         360           Indeno(1,2,3-cd)pyrene         40.4         72           Naphthalene         ND         360           1-Methylnaphthalene         ND         360           2-Methylnaphthalene         ND         360           Pyrene         1090         360           Surrogate Recoveries         Run# 1         Run# 2           o-Terphenyl         86%	Compound         Result         RL         Units Q           Acenaphthene         ND         720         ug/kg U           Acenaphthylene         ND         720         ug/kg U           Anthracene         ND         360         ug/kg U           Benzo(a)anthracene         364         360         ug/kg =           Benzo(a)pyrene         166         72         ug/kg =           Benzo(b)fluoranthene         94.1         72         ug/kg =           Benzo(g,h,i)perylene         36.2         72         ug/kg J           Benzo(k)fluoranthene         96.6         72         ug/kg J           Chrysene         312         360         ug/kg J           Dibenzo(a,h)anthracene         ND         72         ug/kg I           Fluoranthene         1270         360         ug/kg I           Fluorene         ND         360         ug/kg V           Naphthalene         ND         360         ug/kg I           Naphthalene         ND         360         ug/kg V           Naphthalene         ND         360         ug/kg V           Phenanthrene         961         360         ug/kg V           Surrogate Recoveries		

Analyzed

11/06/01

(a) All hits confirmed by spectral match using a diode array detector.

Curo 6/21/cz

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-POSTEB-W-02-Q1

Lab Sample ID:

F11298-7

Matrix: Method: AQ - Field Blank Water EPA 8310 SW846 3510C

Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 10/23/01 **Date Received:** 10/24/01

Percent Solids: n/a

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EE005931.D 1 11/01/01 MRE 10/30/01 OP4093 GEE270

Run #2

#### **Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.0	ug/I U
208-96-8	Acenaphthylene	ND	4.0	ug/l
120-12-7	Anthracene	ND	2.0	ug/l
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l
218-01-9	Chrysene	ND	2.0	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l
206-44-0	Fluoranthene	ND	2.0	ug/l
86-73-7	Fluorene	ND	2.0	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l
91-20-3	Naphthalene	ND	2.0	ug/l
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l
85-01-8	Phenanthrene	ND	2.0	ug/l
129-00-0	Pyrene	ND	2.0	ug/l 🗸
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	57%		33-141%
92-94-4	p-Terphenyl	70%		31-122%

CMO 6/27/02

Client Sample ID: 011-04-PREEB-W-03-Q1

Lab Sample ID: F11333-2

Matrix: AQ - Field Blank Soil

Method: EPA 8310 SW846 3510C

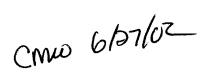
Date Sampled: 10/25/01
Date Received: 10/27/01
Percent Solids: n/a

Project: NAS Whiting Field CTO-0011

Run #1	File ID EE005994.D	<b>DF</b> 1	<b>Analyzed</b> 11/02/01	By MRE	<b>Prep Date</b> 11/01/01	Prep Batch OP4105	Analytical Batch GEE271	
Run #2								

#### **Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.4	ug/l ()
208-96-8	Acenaphthylene	ND	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/l
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/l ♥
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	51%		33-141%
92-94-4	p-Terphenyl	54%		31-122%



B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-5N-S-66'-Q1

Lab Sample ID:

Matrix:

F11333-3

SO - Soil

EPA 8310 SW846 3550B

Date Sampled: Date Received:

10/25/01 10/27/01

Percent Solids: 89.9

Method: Project:

NAS Whiting Field CTO-0011

**Analytical Batch Prep Date Prep Batch** File ID Analyzed By DF **GEE276** 11/06/01 **OP4131** EE006139.D 11/07/01 **MRE** Run #1 a

Run #2

Polynuclear	Aromatic Hydrocarbons				Gual
CAS No.	Compound	Result	RL	Units Q	Cule
83-32-9	Acenaphthene	ND	740	ug/kg U	
208-96-8	Acenaphthylene	ND	740	ug/kg U	
120-12-7	Anthracene	473	370	ug/kg =	
56-55-3	Benzo(a)anthracene	807	370	ug/kg 👱	
50-32-8	Benzo(a)pyrene	336	74	ug/kg =	
205-99-2	Benzo(b)fluoranthene	203	74	ug/kg ≠	
191-24-2	Benzo(g,h,i)perylene	86.1	74	ug/kg =	
207-08-9	Benzo(k)fluoranthene	187	74	ug/kg =	
218-01-9	Chrysene	1420	370	ug/kg =	
53-70-3	Dibenzo(a,h)anthracene	ND	74	ug/kg U	
206-44-0	Fluoranthene	2930	370	ug/kg ≠	
86-73-7	Fluorene	292	370	ug/kg J	<
193-39-5	Indeno(1,2,3-cd)pyrene	97.7	74	ug/kg =	
91-20-3	Naphthalene	ND	370	ug/kg 🗸	
90-12-0	1-Methylnaphthalene	ND	370	ug/kg	
91-57-6	2-Methylnaphthalene	ND .	370	ug/kg 🕈	
85-01-8	Phenanthrene	2270	370	ug/kg ₹	
129-00-0	Pyrene	2450	370	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	72%		37-158%	•
92-94-4	p-Terphenyl	99%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

cmo 6/27/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-18-Q1

Lab Sample ID: Matrix:

F11333-4

SO - Soil

Method: Project:

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: 10/25/01 Date Received:

10/27/01

Percent Solids: 87.7

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
Run #1 a	EE006140.D	1	11/07/01	MRE	11/06/01	OP4131	GEE276

Run #2

Polynuclear	· Aromatic Hydrocarbons				and
CAS No.	Compound	Result	RL	Units Q	aule
83-32-9	Acenaphthene	ND	710	ug/kg <b>U</b>	
208-96-8	Acenaphthylene	ND	710	ug/kg	
120-12-7	Anthracene	ND	<b>350</b>	ug/kg	
56-55-3	Benzo(a)anthracene	ND	350	ug/kg ♥	
50-32-8	Benzo(a)pyrene	62.5	71	ug/kg J	<
205-99-2	Benzo(b)fluoranthene	36.3	<b>7</b> 1	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	ND	<b>7</b> 1	ug/kg U	
207-08-9	Benzo(k)fluoranthene	ND	<b>7</b> 1	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg ♥	
206-44-0	Fluoranthene	252	350	ug/kg J	<
86-73-7	Fluorene	ND	350	ug/kg U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg	
85-01-8	Phenanthrene	ND	350	ug/kg 🕽	
129-00-0	Pyrene	240	350	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	71%		37-158%	6
92-94-4	p-Terphenyl	90%		59-149%	6

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

cmo 6/21/62

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-43-Q1

Lab Sample ID:

F11333-5

Matrix: Method:

Project:

SO - Soil EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/25/01

Date Received: 10/27/01

Percent Solids: 83.8

DF **Analytical Batch** File ID **Prep Date Prep Batch** Analyzed By Run #1 a **GEE276** EE006141.D 11/07/01 **MRE** 11/06/01 OP4131

Run #2

Polynuclear	0,0				
CAS No.	Compound	Result	RL	Units Q	Cide
83-32-9	Acenaphthene	ND	780	ug/kg U	
208-96-8	Acenaphthylene	ND	780	ug/kg	
120-12-7	Anthracene	ND	390	ug/kg	
56-55-3	Benzo(a)anthracene	ND	390	ug/kg ♥	
50-32-8	Benzo(a)pyrene	42.2	78	ug/kg J	~
205-99-2	Benzo(b)fluoranthene	ND	78	ug/kg 🔼	
191-24-2	Benzo(g,h,i)perylene	ND	78	ug/kg (	
207-08-9	Benzo(k)fluoranthene	ND	<b>78</b>	ug/kg	
218-01-9	Chrysene	ND	390	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	78	ug/kg Ψ	
206-44-0	Fluoranthene	235	390	ug/kg J	<
86-73-7	Fluorene	ND	390	ug/kg 以	•
193-39-5	Indeno(1,2,3-cd)pyrene	ND	78	ug/kg \	
91-20-3	Naphthalene	ND	390	ug/kg	
90-12-0	1-Methylnaphthalene	ND	390	ug/kg	
91-57-6	2-Methylnaphthalene	ND	390	ug/kg	
85-01-8	Phenanthrene	ND	390	ug/kg 👈	
129-00-0	Pyrene	193	390	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	64%		37-158%	
92-94-4	p-Terphenyl	88%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

CMO6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

MRE

11/07/01

Client Sample ID: 011-04-MP-20S-S-18-Q1

Lab Sample ID: Matrix: F11333-6

1

SO - Soil

EPA 8310 SW846 3550B

Date Received:

**Prep Date** 

11/06/01

**Date Sampled:** 10/26/01 **Date Received:** 10/27/01

Percent Solids: 89.3

Method: Project:

NAS Whiting Field CTO-0011

File ID DF Analyzed

Prep Batch

**Analytical Batch** 

OP4131 GEE276

Run #1 Run #2

#### Polynuclear Aromatic Hydrocarbons

EE006142.D

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	740	ug/kg <b>U</b>
208-96-8	Acenaphthylene	ND	740	ug/kg
120-12-7	Anthracene	ND	370	ug/kg
56-55-3	Benzo(a)anthracene	ND	370	ug/kg
50-32-8	Benzo(a)pyrene	ND	74	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	74	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND	74	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	74	ug/kg
218-01-9	Chrysene	ND	370	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	74	ug/kg
206-44-0	Fluoranthene	ND	370	ug/kg
86-73-7	Fluorene	ND	370	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	74	ug/kg
91-20-3	Naphthalene	ND	370	ug/kg
90-12-0	1-Methylnaphthalene	ND	370	ug/kg
91-57-6	2-Methylnaphthalene	ND	370	ug/kg
85-01-8	Phenanthrene	ND	370	ug/kg
129-00-0	Pyrene	ND	370	ug/kg <b>V</b>
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	66%		37-158%
92-94-4	p-Terphenyl	83%		59-149%

cumo 6/57/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-20S-S-43-Q1

Lab Sample ID:

F11333-7

Matrix: Method: SO - Soil EPA 8310 SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: Date Received: 10/27/01

10/26/01

Percent Solids: 93.4

**Prep Date Analytical Batch** File ID DF Analyzed **Prep Batch** By EE006144.D Run #1 11/07/01 MRE 11/06/01 OP4131 **GEE276** 

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	710	ug/kg U
208-96-8	Acenaphthylene	ND	710	ug/kg
120-12-7	Anthracene	ND	360	ug/kg
56-55-3	Benzo(a)anthracene	ND	360	ug/kg
50-32-8	Benzo(a)pyrene	ND	71	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	71	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND	71	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	71	ug/kg
218-01-9	Chrysene	ND	360	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg
206-44-0	Fluoranthene	ND	360	ug/kg
86-73-7	Fluorene	ND	360	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg
91-20-3	Naphthalene	ND	360	ug/kg
90-12-0	1-Methylnaphthalene	ND	360	ug/kg
91-57-6	2-Methylnaphthalene	ND	360	ug/kg
85-01-8	Phenanthrene	ND	360	ug/kg
129-00-0	Pyrene	ND	360	ug/kg 🗸
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	62%		37-158%
92-94-4	p-Terphenyl	82%		59-149%



N = Indicates presumptive evidence of a compound

By

MRE

Client Sample ID: 011-04-MP-20S-S-72-Q1

File ID

EE006147.D

Lab Sample ID:

F11333-8

**Date Sampled:** 10/26/01

Matrix:

SO - Soil

Percent Solids: 91.7

Prep Date

11/06/01

Date Received: 10/27/01

Method: Project:

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011

DF

1

**Analytical Batch Prep Batch OP4131 GEE276** 

Run #1 a Run #2

Polynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Cide		
83-32-9	Acenaphthene	ND	710	ug/kg U			
208-96-8	Acenaphthylene	ND	710	ug/kg			
120-12-7	Anthracene	ND	360	ug/kg			
56-55-3	Benzo(a)anthracene	ND	360	ug/kg ♥			
50-32-8	Benzo(a)pyrene	40.9	71	ug/kg J	<		
205-99-2	Benzo(b)fluoranthene	40.0	71	ug/kg J	<		
191-24-2	Benzo(g,h,i)perylene	ND	71	ug/kg Ա			
207-08-9	Benzo(k)fluoranthene	34.4	71	ug/kg J	4		
218-01-9	Chrysene	ND	360	ug/kg 以			
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg 🖊			
206-44-0	Fluoranthene	388	360	ug/kg =			
86-73-7	Fluorene	ND	360	ug/kg 니			
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg			
91-20-3	Naphthalene	ND	360	ug/kg			
90-12-0	1-Methylnaphthalene	ND	360	ug/kg			
91-57-6	2-Methylnaphthalene	ND	360	ug/kg ♥			
85-01-8	Phenanthrene	294	360	ug/kg J	<		
129-00-0	Pyrene	302	360	ug/kg J	<		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	73%		37-158%			
92-94-4	p-Terphenyl	89%		59-149%			

Analyzed

11/07/01

(a) All hits confirmed by spectral match using a diode array detector.

CMUO 6/27/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-72-Q1

Lab Sample ID:

F11333-9

Matrix: Method:

Project:

SO - Soil

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011 **Date Sampled:** 10/26/01 Date Received: 10/27/01

Percent Solids: 90.0

DF

By MRE **Prep Date** 11/06/01

**Prep Batch** OP4131

**Analytical Batch GEE276** 

Run #1 a EE006148.D 1 11/07/01

Analyzed

Run #2

Polynuclear Aromatic Hydrocarbons

File ID

rolynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Circle		
83-32-9	Acenaphthene	ND	720	ug/kg Ц			
208- <del>96</del> -8	Acenaphthylene	ND	720	ug/kg			
120-12-7	Anthracene	ND	360	ug/kg			
56-55-3	Benzo(a)anthracene	ND	360	ug/kg ♥			
50-32-8	Benzo(a)pyrene	53.0	72	ug/kg J	~		
205-99-2	Benzo(b)fluoranthene	40.7	72	ug/kg J	<		
191-24-2	Benzo(g,h,i)perylene	ND	72	ug/kg U			
207-08-9	Benzo(k)fluoranthene	35.0	72	ug/kg J	<		
218-01-9	Chrysene b	ND	720	ug/kg U			
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg			
206-44-0	Fluoranthene	ND	360	ug/kg			
86-73-7	Fluorene	ND	360	ug/kg			
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	ug/kg			
91-20-3	Naphthalene	ND	360	ug/kg			
90-12-0	1-Methylnaphthalene	ND	360	ug/kg			
91-57-6	2-Methylnaphthalene	ND	360	ug/kg			
85-01-8	Phenanthrene	ND	360	ug/kg ✓			
129-00-0	Pyrene	174	360	ug/kg J	<		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	71%		37-158%			
92-94-4	p-Terphenyl	89%	\$	59-149%			

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

amo 6k7/cz

<sup>(</sup>b) Elevated reporting limits due to matrix interference.

Client Sample ID: 011-04-POSTEB-W-03-Q1

Lab Sample ID: F11333-10

**Date Sampled:** 10/26/01 Matrix: AQ - Field Blank Soil Date Received: 10/27/01 Method: EPA 8310 SW846 3510C Percent Solids: n/a

Project: NAS Whiting Field CTO-0011

File ID Ву DF Analyzed **Prep Date Prep Batch Analytical Batch** EE006098.D Run #1 1 11/06/01 MRE 11/02/01 OP4114 **GEE274** Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.0	ug/I U
208-96-8	Acenaphthylene	ND	4.0	ug/l
120-12-7	Anthracene	ND	2.0	ug/l
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l
218-01-9	Chrysene	ND	2.0	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l
206-44-0	Fluoranthene	ND	2.0	ug/l
86-73-7	Fluorene	ND	2.0	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l
91-20-3	Naphthalene	ND	2.0	ug/l
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l
85-01-8	Phenanthrene	ND	2.0	ug/l
129-00-0	Pyrene	ND	2.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	62%	2. 3.	33-141%
92-94-4	p-Terphenyl	60%		31-122%



RL = Reporting Limit

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-PREEB-W-01-Q2

Lab Sample ID:

F12178-1

DF

1

Matrix:

AQ - Field Blank Soil

Method: Project:

EPA 8310 SW846 3510C NAS Whiting Field CTO-0011 Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: n/a

**Analytical Batch** 

Run #1

File ID AA010106.D

Analyzed 02/07/02

By **MRE** 

Prep Date Prep Batch 02/06/02

OP4611 **GAA455** 

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.4	ug/l 🔥
208-96-8	Acenaphthylene	ND	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/l
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	<b>0.22</b>	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	<b>2.2</b>	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/i
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%	ž.	33-141%
92-94-4	p-Terphenyl	50%	4	31-122%

como 6/21/02

Client Sample ID: 011-04-MP-10W-S-18'-Q2

Lab Sample ID:

F12178-2

Matrix:

SO - Soil

Method: Project:

Run #2

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011 Date Sampled: 01/30/02

Date Received: 01/31/02 Percent Solids: 87.0

**Analytical Batch** Prep Batch **Prep Date** Analyzed Вy DF File ID **GEE328 OP4586** 02/01/02 **MRE** 02/05/02 1 EE007143.D Run #1 a

Polynuclear Aromatic Hydrocarbons

Polynuclear	Aromatic Hydrocarbons				and
CAS No.	Compound	Result	RL	Units Q	Cede
83-32-9	Acenaphthene	ND	790	ug/kg U	
208-96-8	Acenaphthylene	ND	790	ug/kg	
120-12-7	Anthracene	ND	390	ug/kg ¥	
56-55-3	Benzo(a)anthracene	161	390	ug/kg J	<
50-32-8	Benzo(a)pyrene	97.7	79	ug/kg =	
205-99-2	Benzo(b)fluoranthene	54.4	79	ug/kg J	4
191-24-2	Benzo(g,h,i)perylene	ND	<i>7</i> 9	ug/kg <b>U</b>	,
207-08-9	Benzo(k)fluoranthene	42.3	79	ug/kg J	4
218-01-9	Chrysene	ND	390	ug/kg 👪	
53-70-3	Dibenzo(a,h)anthracene	ND	79	ug/kg 🔥	•
206-44-0	Fluoranthene	448	390	ug/kg =	
86-73-7	Fluorene	ND	390	ug/kg 💘	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	79	ug/kg	
91-20-3	Naphthalene	ND	390	ug/kg	
90-12-0	1-Methylnaphthalene	ND	390	ug/kg	
90-12-0 91-57-6	2-Methylnaphthalene	ND	<b>390</b>	ug/kg ₩	
	Phenanthrene	352	390	ug/kg J	
85-01-8	<del></del>	443	390	ug/kg ≃	
129-00-0	Pyrene	0:2.2 <b>3</b> 2.232.80083	arvet TT	0 0	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	84%		37-158	
92-94-4	p-Terphenyl	96%		59-149	%

(a) All hits confirmed by spectral match using a diode array detector.

Cumo 6/27/02

ND = Not detected

RL = Reporting Limit To diagram and another than range

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-43'-Q2

Lab Sample ID:

F12178-3

SO - Soil

Matrix:

Method: Project:

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011 **Date Sampled:** 01/30/02

Date Received: 01/31/02

Percent Solids: 91.1

Run #1 \*

File ID EE007144.D

Analyzed DF 02/05/02 1

**Prep Date** By MRE 02/01/02

**Prep Batch OP4586** 

**Analytical Batch GEE328** 

Run #2

Polynuclear	Aromatic Hydrocarbons				Qual
CAS No.	Compound	Result	RL	Units Q	Cole
83-32-9	Acenaphthene	ND	680	ug/kg U	
208-96-8	Acenaphthylene	ND	680	ug/kg	
120-12-7	Anthracene	ND	340	ug/kg	
56-55-3	Benzo(a)anthracene	ND.	340	ug/kg Ψ	
50-32-8	Benzo(a)pyrene	55.5	68	ug/kg J	<
205-99-2	Benzo(b)fluoranthene	48.5	68	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	ND	68	ug/kg 🕻	
207-08-9	Benzo(k)fluoranthene	44.5	ે 68	ug/kg J	<
218-01-9	Chrysene	ND	340	ug/kg U	*
53-70-3	Dibenzo(a,h)anthracene	ND	68	ug/kg	
206-44-0	Fluoranthene	ND	340	ug/kg	
86-73-7	Fluorene	ND	340	ug/kg	•
193-39-5	Indeno(1,2,3-cd)pyrene	ND	68	ug/kg	•
91-20-3	Naphthalene	ND	340	ug/kg	
90-12-0	1-Methylnaphthalene	ND	340	ug/kg	
91-57-6	2-Methylnaphthalene	ND	340	ug/kg	
85-01-8	Phenanthrene	ND ·	340	ug/kg ❤	
129-00-0	Pyrene	178	340	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	<i>7</i> 9%		37-1589	6
92-94-4	p-Terphenyl	98%		59-1499	6

(a) All hits confirmed by spectral match using a diode array detector.

Crows 6/27/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-72'-Q2

Lab Sample ID:

F12178-4

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 88.4

12.0

**Prep Date Prep Batch Analytical Batch** Analyzed By File ID DF OP4586 **GEE328 MRE** 02/01/02 EE007145.D 1 02/05/02 Run #1 a

Run #2

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q	code
83-32-9	Acenaphthene	ND	720	ug/kg <b>U</b>	
208-96-8	Acenaphthylene	ND	720	ug/kg	
120-12-7	Anthracene	ND	360	ug/kg	
56-55-3	Benzo(a)anthracene	ND	360	ug/kg ♥	
50-32-8	Benzo(a)pyrene	69.6	72	ug/kg J	<b>&lt;</b>
205-99-2	Benzo(b)fluoranthene	52.7	<b>72</b>	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	ND	72	ug/kg <b>U</b>	_
207-08-9	Benzo(k)fluoranthene	49.8	72	ug/kg J	<
218-01-9	Chrysene	ND	360	ug/kg 🖰	
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg U	
206-44-0	Fluoranthene	271	360	ug/kg J	<
86-73-7	Fluorene	ND	<b>360</b>	ug/kg 🚺	•
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	ug/kg	•
91-20-3	Naphthalene	ND	360	ug/kg	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg	
85-01-8	Phenanthrene	ND	360	ug/kg ✔	
129-00-0	Pyrene	263	360	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	86%		37-158%	
92-94-4	p-Terphenyl	101%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

omo 6/21/a

ND = Not detected

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-05N-S-18'-Q2

Lab Sample ID:

F12178-5

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 88.3

0.50

Ī	Run #1 a	File ID EE007160.D	DF 40	Analyzed 02/06/02	By MRE	Prep Date 02/01/02	Prep Batch OP4586	Analytical Batch GEE329
	Kun #1 "	EE00/100.D	70	OEI OOI OE		02.01.01		

Run #2

CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	20400	31000	ug/kg J	M
208-96-8	Acenaphthylene	ND	31000	ug/kg 🖊	
120-12-7	Anthracene	27700	16000	ug/kg ブ	M
56-55-3	Benzo(a)anthracene	30200	16000	ug/kg	M
50-32-8	Benzo(a)pyrene	13000	3100	ug/kg \	M
205-99-2	Benzo(b)fluoranthene	7260	ិ 3100	ug/kg 🌂	M
191-24-2	Benzo(g,h,i)perylene	3050	ੇ 3100	ug/kg J	< M
207-08-9	Benzo(k)fluoranthene	6170	3100	ug/kg	M
218-01-9	Chrysene	17400	16000	ug/kg ¥	M
53-70-3	Dibenzo(a,h)anthracene	913	3100	ug/kg J	< M
206-44-0	Fluoranthene	119000	16000	ug/kg \	M
86-73-7	Fluorene	17400	16000	ug/kg	M
193-39-5	Indeno(1,2,3-cd)pyrene	3460	3100	ug/kg ₩	. M
91-20-3	Naphthalene	ND	16000	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	16000	ug/kg 4	
91-57-6	2-Methylnaphthalene	7920	16000	ug/kg J	< M
85-01-8	Phenanthrene	106000	16000	ug/kg \	M
129-00-0	Pyrene	92900	16000	ug/kg	M
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	0% b	<u>.</u>	37-158%	
92-94-4	p-Terphenyl	0% b		59-149%	

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

Cm06/27/02

<sup>(</sup>b) Outside control limits due to dilution.

B = Indicates analyte found in associated method blank

NI - Indicator accommetion mildenes of a accommend

Client Sample ID: 011-04-MP-05N-S-38'-Q2

Lab Sample ID:

F12178-6

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 91.9

Run#1ª	File ID EE007159.D	<b>DF</b> 2	Analyzed 02/06/02	By MRE	Prep Date 02/01/02	Prep Batch OP4586	Analytical Batch GEE329
Run #2							

Polynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Cide		
83-32-9	Acenaphthene	709	1500	ug/kg J	<		
208-96-8	Acenaphthylene	ND	1500	ug/kg 👪			
120-12-7	Anthracene	1050	730	ug/kg 🖘			
56-55-3	Benzo(a)anthracene	1310	730	ug/kg =			
50-32-8	Benzo(a)pyrene	528	150	ug/kg =			
205-99-2	Benzo(b)fluoranthene	319	150	ug/kg =	_		
191-24-2	Benzo(g,h,i)perylene	132	150	ug/kg J	~		
207-08-9	Benzo(k)fluoranthene	267	150	ug/kg 🛎			
218-01-9	Chrysene	772	730	ug/kg =			
53-70-3	Dibenzo(a,h)anthracene	ND	150	ug/kg <b>U</b>			
206-44-0	Fluoranthene	4930	730	ug/kg =			
86-73-7	Fluorene	670	730	ug/kg J	<		
193-39-5	Indeno(1,2,3-cd)pyrene	155	150	ug/kg =	•		
91-20-3	Naphthalene	ND	730	ug/kg 🖊			
90-12-0	1-Methylnaphthalene	ND	730	ug/kg			
91-57-6	2-Methylnaphthalene	ND	730	ug/kg 🍑			
85-01-8	Phenanthrene	4180	730	ug/kg =			
129-00-0	Pyrene	3800	730	ug/kg =			
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	96%		37-158%	6		
92-94-4	p-Terphenyl	124%		59-149%	6		

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector. Dilution required due matrix interference.

amo 6/27/02

Client Sample ID: 011-04-MP-05N-S-66'-Q2

Lab Sample ID:

F12178-7

SO - Soil

Matrix: Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 92.2

Run #1 a	File ID EE007158.D	<b>DF</b>	Analyzed 02/06/02	By MRE	Prep Date 02/01/02	Prep Batch OP4586	Analytical Batch GEE329
Run #2							

Polynuclear Aromatic Hydrocarbons							
CAS No.	Compound	Result	RL	Units Q	Code		
83-32-9	Acenaphthene	ND	720	ug/kg U			
208-96-8	Acenaphthylene	ND	720	ug/kg			
120-12-7	Anthracene	ND	360	ug/kg			
56-55-3	Benzo(a)anthracene	ND	360	ug/kg			
50-32-8	Benzo(a)pyrene	ND	72	ug/kg			
205-99-2	Benzo(b)fluoranthene	ND	72	ug/kg			
191-24-2	Benzo(g,h,i)perylene	ND	72	ug/kg			
207-08-9	Benzo(k)fluoranthene	ND	72	ug/kg			
218-01-9	Chrysene	ND	360	ug/kg			
53-70-3	Dibenzo(a,h)anthracene	ŅD	72	ug/kg ♥	_		
206-44-0	Fluoranthene	204	360	ug/kg J	•		
86-73-7	Fluorene	ND	360	ug/kg 🗸	•		
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	ug/kg	•		
91-20-3	Naphthalene	ND	360	ug/kg			
90-12-0	1-Methylnaphthalene	ND	360	ug/kg			
91-57-6	2-Methylnaphthalene	ND	360	ug/kg			
85-01-8	Phenanthrene	ND	360	ug/kg 🛂	4		
129-00-0	Pyrene	168	360	ug/kg J	~		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
84-15-1	o-Terphenyl	82%		37-158%	,		
92-94-4	p-Terphenyl	94%	N. Ö	59-149%	5		

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.



Client Sample ID: 011-04-MP-30E-S-18'-Q2

Lab Sample ID:

F12178-8

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

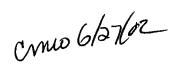
Date Received: 01/31/02

Percent Solids: 89.8

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1 a	EE007152.D	1	02/05/02	MRE	02/01/02	OP4586	GEE328
Run #2							

Polynuclear	Aromatic Hydrocarbons				(Jag)
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	ND	700	ug/kg U	
208-96-8	Acenaphthylene	ND	700	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg	
56-55-3	Benzo(a)anthracene	ND	<b>350</b>	ug/kg ¥	
50-32-8	Benzo(a)pyrene	63.8	<b>7</b> 0	ug/kg J	<b>&lt;</b>
205-99-2	Benzo(b)fluoranthene	45.4	70	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	ND	70	ug/kg 🔾	
207-08-9	Benzo(k)fluoranthene	41.6	70	ug/kg J	_ <
218-01-9	Chrysene	ND	350	ug/kg 🔼	
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg	
206-44-0	Fluoranthene	ND	350	ug/kg	
86-73-7	Fluorene	ND	350	ug/kg	•
193-39-5	Indeno(1,2,3-cd)pyrene	ND	70	ug/kg	•
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg	
85-01-8	Phenanthrene	ND	350	ug/kg	
129-00-0	Pyrene	ND	350	ug/kg 🗸	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	88%	**	37-1589	
92-94-4	p-Terphenyl	100%		59-1499	6

(a) All hits confirmed by spectral match using a diode array detector.



Client Sample ID: 011-04-MP-30E-S-43'-Q2

Lab Sample ID:

F12178-9

SO - Soil EPA 8310 SW846 3550B Date Sampled: 01/30/02

Date Received: 01/31/02

Method: Project:

Matrix:

NAS Whiting Field CTO-0011

Percent Solids: 89.0

**Analytical Batch Prep Batch Prep Date** Analyzed By DF File ID OP4586 **GEE328** 02/01/02 MRE 02/05/02 Run #1 a EE007153.D

Run #2

Polynuclear Aromatic Hydrocarbons						
CAS No.	Compound	Result	RL	Units Q	Cide	
83-32-9	Acenaphthene	ND	730	ug/kg U		
208-96-8	Acenaphthylene	ND	730	ug/kg		
120-12-7	Anthracene	ND	360	ug/kg		
56-55-3	Benzo(a)anthracene	ND	360	ug/kg ♥		
50-32-8	Benzo(a)pyrene	60.4	ି 73	ug/kg J	< <	
205-99-2	Benzo(b)fluoranthene	43.3	73	ug/kg J	<	
191-24-2	Benzo(g,h,i)perylene	ND	<i>7</i> 3	ug/kg <b>U</b>	_	
207-08-9	Benzo(k)fluoranthene	42.5	<i>7</i> 3	ug/kg J	<	
218-01-9	Chrysene	ND	360	ug/kg 🚺		
53-70-3	Dibenzo(a,h)anthracene	ND	<i>7</i> 3	ug/kg		
206-44-0	Fluoranthene	ND	<b>36</b> 0	ug/kg		
86-73-7	Fluorene	ND	360	ug/kg	•	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	<i>7</i> 3	ug/kg	•	
91-20-3	Naphthalene	NĐ	360	ug/kg		
90-12-0	1-Methylnaphthalene	ND	360	ug/kg		
91-57-6	2-Methylnaphthalene	ND	360	ug/kg		
85-01-8	Phenanthrene	ND	360	ug/kg		
129-00-0	Pyrene	ND	360	ug/kg ↓		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	83%	(\$. 1. 1.	37-158%		
92-94-4	p-Terphenyl	93%		59-149%		

(a) All hits confirmed by spectral match using a diode array detector.

CM106/27/02

ND = Not detected

RL = Reporting Limit

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-POSTEB-W-01-Q2

Lab Sample ID:

F12178-10

Matrix:

AQ - Field Blank Soil

EPA 8310 SW846 3510C

Method: Project:

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: n/a

	File ID	DF	Analyzed	Ву	Prep Date		Analytical Batch
Run #1	AA010107.D	1	02/07/02	MRE	02/06/02	OP4611	GAA455

Run #2

### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.0	ug/l 🔾
208-96-8	Acenaphthylene	ND	4.0	ug/l
120-12-7	Anthracene	ND	2.0	ug/l
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l
218-01-9	Chrysene	ND	2.0	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l
206-44-0	Fluoranthene	ND	2.0	ug/l
86-73-7	Fluorene	ND	2.0	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l
91-20-3	Naphthalene	ND	2.0	ug/l
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l
91-57-6	2-Methylnaphthalene	ND.	2.0	ug/l
85-01-8	Phenanthrene	ND	2.0	ug/l
129-00-0	Pyrene	ND	2.0	ug/l ❤
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%	1.4 (\$.	33-141%
92-94-4	p-Terphenyl	53%		31-122%

cmo6/5/02

Client Sample ID: 011-04-PREEB-W-02-Q2

Lab Sample ID:

F12221-1

Matrix:

AQ - Field Blank Soil EPA 8310 SW846 3510C

Method: Project:

Run #2

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: n/a

						w W.4.1.	Analytical Batch
Fi	le ID	DF	Analyzed	Ву	Prep Date	Prep Batch	GAA456
Pun #1 A	A010118.D	1	02/12/02	MRE	02/08/02	OP4622	GAA430

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Résult	RL	Units Q
83-32-9	Acenaphthene	ND.	4.0	ug/l U
208-96-8	Acenaphthylene	ND	4.0	ug/l
120-12-7	Anthracene	ND	2.0	ug/l
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l
218-01-9	Chrysene	ND	2.0	ug/i
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l
206-44-0	Fluoranthene	ND	2.0	ug/l
86-73-7	Fluorene	ND	2.0	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l
91-20-3	Naphthalene	ND	2.0	ug/l
90-12-0	1-Methylnaphthalene	ND	<b>2.0</b>	ug/l
90-12-0 91-57-6	2-Methylnaphthalene	ND	2.0	ug/l
"	Phenanthrene	ND	2.0	ug/l
85-01-8	<u> </u>	ND	2.0	ug/l ₩
129-00-0	Pyrene		-N41X	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		33-141%
92-94-4	p-Terphenyl	64%		31-122%

Como CAHOZ

Client Sample ID: 011-04-MP-30E-S-72'-Q2

Lab Sample ID:

F12221-2

Matrix:

SO - Soil

Method:

Project:

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011 Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 93.8

File ID EE007226.D

Analyzed DF 02/13/02 1

By **MRE**  **Prep Date** 02/12/02

**Prep Batch** OP4632

**Analytical Batch GEE333** 

Run #1 a Run #2

#### Polynuclear Aromatic Hydrocarbons

Polynuclear Aromatic Hydrocarbons					
CAS No.	Compound	Result	RL	Units Q	Codes
83-32-9	Acenaphthene	ND	700	ug/kg 🗘	
208-96-8	Acenaphthylene	ND	<b>700</b>	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg	
56-55-3	Benzo(a)anthracene	ND	350	ug/kg	
50-32-8	Benzo(a)pyrene	ND	70	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	70	ug/kg	
191-24-2	Benzo(g,h,i)perylene	NÐ	<b>7</b> 0	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	70	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg ♥	<u> </u>
206-44-0	Fluoranthene	180	350	ug/kg J	~
86-73-7	Fluorene	ND	350	ug/kg 🚺	
193-39-5	Indeno(1,2,3-cd)pyrene	NÐ	70	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg ¥	
85-01-8	Phenanthrene	149	350	ug/kg J	<
129-00-0	Pyrene	139	350	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Limits	
84-15-1	o-Terphenyl	65%	Š.	37-158%	
92-94-4	p-Terphenyl	78%		59-149%	İ

(a) All hits confirmed by spectral match using a diode array detector.



Client Sample ID: 011-04-BKGD-S-22'-Q2

Lab Sample ID:

F12221-3

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

Run #1 a	File ID EE007227.D	DF 1	Analyzed 02/13/02	By MRE	Prep Date 02/12/02	Prep Batch OP4632	Analytical Batch GEE333	
Run #2	ELOGIEZI.D	-						

Polynuclear Aromatic Hydrocarbons					
CAS No.	Compound	Result	RL	Units Q	cide
83-32-9	Acenaphthene	ND	700	ug/kg U	
208-96-8	Acenaphthylene	ND	700	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg	
56-55-3	Benzo(a)anthracene	.ND	350	ug/kg V	
50-32-8	Benzo(a)pyrene	83.2	70	ug/kg =	
205-99-2	Benzo(b)fluoranthene	53.1.	70	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	36.9	<i>7</i> 0	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	42.1	<b>70</b>	ug/kg J	<
218-01-9	Chrysene	ND	350	ug/kg U	
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg 4	
206-44-0	Fluoranthene	310	350	ug/kg J	<
86-73-7	Fluorene	ND	350	ug/kg U	_
193-39-5	Indeno(1,2,3-cd)pyrene	37.0	70	ug/kg J	<
91-20-3	Naphthalene	ND	<b>350</b>	ug/kg 🖊	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg ¥	_
85-01-8	Phenanthrene	250	350	ug/kg J	<
129-00-0	Pyrene	266	350	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	68%		37-158%	
92-94-4	p-Terphenyl	80%		59-149%	

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.

CMO6/27/0c

Client Sample ID: 011-04-BKGD-S-43'-Q2

Lab Sample ID:

F12221-4

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.3

NAS Whiting Field CTO-0011 Project:

File ID Run #1 \* EE007228.D

DF 1

Analyzed 02/13/02

By MRE Prep Date 02/12/02

**Prep Batch** 

**Analytical Batch** 

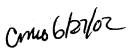
**GEE333** OP4632

Run #2

# Polynuclear Aromatic Hydrocarbons

Polynuclear	Aromatic Hydrocarbons				Qual
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	ND	780	ug/kg U	
208-96-8	Acenaphthylene	ND	780	ug/kg	
120-12-7	Anthracene	ND	390	ug/kg	
56-55-3	Benzo(a)anthracene	ND	390	ug/kg Ψ	
50-32-8	Benzo(a)pyrene	82.3	<i>7</i> 8	ug/kg =	
205-99-2	Benzo(b)fluoranthene	61.8	<b>78</b>	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	43.6	<b>78</b>	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	45.8	<b>78</b>	ug/kg J	<
218-01-9	Chrysene	ND	390	ug/kg U	
53-70-3	Dibenzo(a,h)anthracene	ND	78	ug/kg ♥	
206-44-0	Fluoranthene	358	390	ug/kg J	<
86-73-7	Fluorene	NĐ	390	ug/kg 💢	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	78	ug/kg	
91-20-3	Naphthalene	ND	390	ug/kg	
90-12-0	1-Methylnaphthalene	ND	390	ug/kg	
91-57-6	2-Methylnaphthalene	ND	390	ug/kg	
85-01-8	Phenanthrene	303	<b>390</b>	ug/kg J	<
129-00-0	Pyrene	306	390	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	70%	**	37-158 <i>%</i>	,
92-94-4	p-Terphenyl	84%		59-149%	)
7 <i>6</i> -74-4	h-1crhuon);	60000000000000000000000000000000000000	9649		

(a) All hits confirmed by spectral match using a diode array detector.



Client Sample ID: 011-04-BKGD-S-72'-Q2

Lab Sample ID:

Matrix:

Method:

Project:

F12221-5 SO - Soil

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 93.4

L		
	File ID	DF
Run #1 *	EE007229.D	1

Analyzed 02/13/02

**Prep Date** By 02/12/02 **MRE** 

Prep Batch OP4632

**Analytical Batch** 

**GEE333** 

Run #2

Polynuclea	r Aromatic Hydrocarbons				00
CAS No.	Compound	Result	RL	Units Q	code
83-32-9	Acenaphthene	ND	700	ug/kg U	
208-96-8	Acenaphthylene	ND	700	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg ♥	,
56-55-3	Benzo(a)anthracene	221	350	ug/kg J	<
50-32-8	Benzo(a)pyrene	116	70	ug/kg =	
205-99-2	Benzo(b)fluoranthene	94.6	<b>7</b> 0	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	62,3	<b>7</b> 0	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	85,1	70	ug/kg =	
218-01-9	Chrysene	248	350	ug/kg J	<
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg U	
206-44-0	Fluoranthene	761	350	ug/kg =	
86-73-7	Fluorene	ND	350	ug/kg U	_
193-39-5	Indeno(1,2,3-cd)pyrene	40.6	70	ug/kg J	
91-20-3	Naphthalene	ND	350	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg ↓	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg	
85-01-8	Phenanthrene	681	350	ug/kg =	
129-00-0	Pyrene	612	350	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	73%		37-158%	
92-94-4	p-Terphenyl	89%		59-149%	

<sup>(</sup>a) All hits confirmed by spectral match using a diode array detector.



**MRE** 

Client Sample ID: 011-04-MP-20S-S-18'-Q2

Lab Sample ID:

F12221-6

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

Project:

NAS Whiting Field CTO-0011

Analyzed

02/13/02

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.7

DF

1

Prep Date By 02/12/02

Prep Batch OP4632

**Analytical Batch GEE333** 

Run #1 Run #2

Polynuclear Aromatic Hydrocarbons

EE007230.D

File ID

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	<i>7</i> 70	ug/kg U.
208-96-8	Acenaphthylene	ND.	770	ug/kg
120-12-7	Anthracene	ND	380	ug/kg
56-55-3	Benzo(a)anthracene	ND	380	ug/kg
50-32-8	Benzo(a)pyrene	ND	77	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	<b>7</b> 7	ug/kg
191-24-2	Benzo(g,h,i)perylene	nď	77	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	77	ug/kg
218-01-9	Chrysene	NĎ	380	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	77	ug/kg
206-44-0	Fluoranthene	NĐ	380	ug/kg
86-73-7	Fluorene	ND	380	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	77	ug/kg
91-20-3	Naphthalene	ND	380	ug/kg
90-12-0	1-Methylnaphthalene	ND	380	ug/kg
91-57-6	2-Methylnaphthalene	ND	380	ug/kg
85-01-8	Phenanthrene	ND.	380	ug/kg
129-00-0	Pyrene	ND	380	ug/kg ₩
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		37-158%
92-94-4	p-Terphenyl	86%		59-149%

Como 6/27/02

Client Sample ID: 011-04-MP-20S-S-43'-Q2

Lab Sample ID:

F12221-7

Matrix:

SO - Soil

Method:

EPA 8310 SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

Run#1 Run #2

File ID EE007231.D

DF 1

By Analyzed MRE 02/13/02

**Prep Date** 02/12/02

**Prep Batch** OP4632

**Analytical Batch** 

**GEE333** 

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	710	ug/kg U
208-96-8	Acenaphthylene	ND	710	ug/kg
120-12-7	Anthracene	ND	360	ug/kg
56-55-3	Benzo(a)anthracene	ND	360	ug/kg
50-32-8	Benzo(a)pyrene	ND	71	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	71	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND .	71	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	71	ug/kg
218-01-9	Chrysene	ND	360	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg
206-44-0	Fluoranthene	ND:	360	ug/kg
86-73-7	Fluorene	NÐ	360	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg
91-20-3	Naphthalene	ND	360	ug/kg
90-12-0	1-Methylnaphthalene	ND	360	ug/kg
91-57-6	2-Methylnaphthalene	ND	360	ug/kg
85-01-8	Phenanthrene	ND	360	ug/kg
129-00-0	Pyrene	ND	360	ug/kg ♥
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		37-158%
92-94-4	p-Terphenyl	97%		59-149%

cmuo 6/27/02

Client Sample ID: 011-04-MP-20S-S-72'-Q2

Lab Sample ID: Matrix:

F12221-8

SO - Soil

Date Sampled: 02/04/02 Date Received: 02/05/02

EPA 8310 SW846 3550B

Method: Project:

NAS Whiting Field CTO-0011

Percent Solids: 94.4

Run #1	File ID EE007232.D	<b>DF</b>	Analyzed 02/13/02	By MRE	Prep Date 02/12/02	Prep Batch OP4632	Analytical Batch GEE333
Run #2							

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	690	ug/kg U
208-96-8	Acenaphthylene	ND	690	ug/kg
120-12-7	Anthracene	ND	340	ug/kg
56-55-3	Benzo(a)anthracene	ND	340	ug/kg
50-32-8	Benzo(a)pyrene	ND	69	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	69	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND	69	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	<b>69</b>	ug/kg
218-01-9	Chrysene	ND	340	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	69	ug/kg
206-44-0	Fluoranthene	ND	340	ug/kg
86-73-7	Fluorene	ND	340	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	69	ug/kg
91-20-3	Naphthalene	ND	340	ug/kg
90-12-0	1-Methylnaphthalene	ND	340	ug/kg
91-57-6	2-Methylnaphthalene	ŇĐ	<b>340</b>	ug/kg
85-01-8	Phenanthrene	ND	340	ug/kg
129-00-0	Pyrene	ND	340	ug/kg 🏑
CAS No.	Surrogate Recoveries	Run#1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		37-158%
92-94-4	p-Terphenyl	87%		59-149%

Cm06/57/02

Client Sample ID: 011-04-MP-20S-S-100'-Q2

Lab Sample ID:

F12221-9

SO - Soil

Matrix: Method:

EPA 8310 SW846 3550B

Project:

Run #2

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

- 1	L							1 1 1 D-4-L
		File ID	DF	Analyzed	By	Prep Date	Prep Batch OP4632	Analytical Batch GEE333
	Run#1	EE007234.D	1	02/13/02	MRE	02/12/02	OF4032	GLLDOO

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	720	ug/kg U
208-96-8	Acenaphthylene	ND	720	ug/kg
120-12-7	Anthracene	ND	360	ug/kg
56-55-3	Benzo(a)anthracene	ND	360	ug/kg
50-32-8	Benzo(a)pyrene	ND	72	ug/kg
205-99-2	Benzo(b)fluoranthene	NĎ	72	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND	72	ug/kg
207-08-9	Benzo(k)fluoranthene	ND.	72	ug/kg
218-01-9	Chrysene	ND	360	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg
206-44-0	Fluoranthene	ND	360	ug/kg
86-73-7	Fluorene	ND	360	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	ug/kg
91-20-3	Naphthalene	NĐ	360	ug/kg
90-12-0	1-Methylnaphthalene	ND	360	ug/kg
91-57-6	2-Methylnaphthalene	ND	360	ug/kg
85-01-8	Phenanthrene	ND	360	ug/kg
129-00-0	Pyrene	ND	360	ug/kg Ψ
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	83%		37-158%
92-94-4	p-Terphenyl	92%		59-149%

cmo 6/27/00

Client Sample ID: 011-04-POSTEB-W-02-Q2

Lab Sample ID:

F12221-10

Matrix: Method: AQ - Field Blank Soil EPA 8310 SW846 3510C

Project:

Run #2

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02 Date Received: 02/05/02

Percent Solids: n/a

						Dan Datch	Analytical Batch	
Run #1	File ID AA010119.D	<b>DF</b>	<b>Analyzed</b> 02/12/02	By MRE	Prep Date 02/08/02	Prep Batch OP4622	GAA456	

## Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9 208-96-8	Acenaphthene Acenaphthylene Anthracene	ND ND ND	4.0 4.0 2.0	ug/l (\ ug/l   ug/l
120-12-7 56-55-3 50-32-8	Benzo(a)anthracene Benzo(a)pyrene	ND ND ND	0.20 0.20 0.20	ug/l ug/l ug/l
205-99-2 191-24-2 207-08-9	Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	ND ND	0.20 0.20	ug/l ug/l
218-01-9 53-70-3 206-44-0	Chrysene Dibenzo(a,h)anthracene Fluoranthene	ND ND ND	2.0 0.20 2.0	ug/l ug/l ug/l
86-73-7 193-39-5 91-20-3	Fluorene Indeno(1,2,3-cd)pyrene Naphthalene	ND ND ND	2.0 0.20 2.0	ug/l ug/l ug/l
90-12-0 91-57-6	1-Methylnaphthalene 2-Methylnaphthalene Phenanthrene	ND ND ND	2.0 2.0 2.0	ug/l ug/l ug/l
85-01-8 129-00-0	Pyrene	ND Run# 1	2.0 Run#	ug/l
CAS No. 84-15-1 92-94-4	Surrogate Recoveries o-Terphenyl p-Terphenyl	87% 70%		33-141% 31-122%

CMW GOYOZ

**MRE** 

Client Sample ID: 011-04-PREEB-W-01-Q3

Lab Sample ID: F13055-1

File ID

AA010632.D

Matrix: Method: AO - Field Blank Soil EPA 8310 SW846 3510C

Project:

NAS Whiting Field CTO-0011

05/07/02

DF

1

Date Sampled: 04/29/02

Date Received: 05/01/02 Percent Solids: n/a

OP5089

**Analytical Batch Prep Batch** Prep Date Analyzed By **GAA490** 

05/06/02

Run #1 Run #2

**Final Volume** Initial Volume Run #1 1.0 ml 960 ml

Run #2

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.0	ug/l <b>U</b>
208-96-8	Acenaphthylene	ND	4.0	ug/l
120-12-7	Anthracene	ND	2.0	ug/l
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l
218-01-9	Chrysene	ND	2.0	ug/l
53-70-3	Dibenzo(a,h)anthracene	NĐ	0.20	ug/l
206-44-0	Fluoranthene	ND	2.0	ug/l
86-73-7	Fluorene	ND	2.0	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l
91-20-3	Naphthalene	ND	2.0	ug/l
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l
85-01-8	Phenanthrene	ND	2.0	ug/l
129-00-0	Pyrene	ND	2.0	ug/l V
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		33-141%
92-94-4	p-Terphenyl	53%		31-122%

omus 6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

By

MRE

Analyzed

05/14/02

Client Sample ID: 011-04-BKGD-S-22'-Q3

Lab Sample ID:

Matrix:

F13055-2 SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

89.6 Percent Solids:

**Analytical Batch Prep Date Prep Batch** 05/04/02

**GAA494** OP5087

Run #1 a Run #2

**Initial Weight** 

AA010706.D

File ID

**Final Volume** 

Run #1 30.7 g  $5.0 \, ml$ 

DF

1

Run #2

Polynuclear Aromatic Hydrocarbons

	•				Qual
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	ND	730	ug/kg ų	
208-96-8	Acenaphthylene	ND	730	ug/kg \	
120-12-7	Anthracene	ND	360	ug/kg ♥	
56-55-3	Benzo(a)anthracene	73.5	360	ug/kg J	<
50-32-8	Benzo(a)pyrene	ND	73	ug/kg U	
205-99-2	Benzo(b)fluoranthene	ND	73	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	<b>73</b>	ug/kg 🐓	
218-01-9	Chrysene	109	360	ug/kg J	<
53-70-3	Dibenzo(a,h)anthracene	ND	73	ug/kg 4	
206-44-0	Fluoranthene	198	360	ug/kg J	<
86-73-7	Fluorene	ND	360	ug/kg U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	73	ug/kg \	
91-20-3	Naphthalene	ND	360	ug/kg	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg ✔	
85-01-8	Phenanthrene	161	360	ug/kg J	<
129-00-0	Pyrene	170	360	ug/kg J	Z
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	88%		37-1589	
92-94-4	p-Terphenyl	99%		59-1499	%

(a) All hits confirmed by spectral match using a diode array detector.

cmio 6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-43'-Q3

Lab Sample ID:

F13055-3

SO - Soil

EPA 8310 SW846 3550B

Date Sampled: 04/29/02

Date Received: 05/01/02

Method: Project:

Matrix:

NAS Whiting Field CTO-0011

Percent Solids: 94.4

File ID AA010680.D

Analyzed 05/13/02

By MRE

**Prep Date** 05/04/02

Prep Batch **OP5087** 

Qual

**Analytical Batch GAA493** 

Run #1 a Run #2

Initial Weight

Polynuclear Aromatic Hydrocarbons

31.0 g

Run #1

5.0 ml

**Final Volume** 

DF

1

Run #2

85-01-8

129-00-0

CAS No.	Compound	Result	RL	Units Q	Cide
83-32-9	Acenaphthene	ND	680	ug/kg <b>U</b>	
208-96-8	Acenaphthylene	ND	680	ug/kg	
120-12-7	Anthracene	ND	340	ug/kg	
56-55-3	Benzo(a)anthracene	ND	340	ug/kg	
50-32-8	Benzo(a)pyrene	ND	68	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND.	68	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	68	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	68	ug/kg	
218-01-9	Chrysene	NĐ	340	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	68	ug/kg ₩	
206-44-0	Fluoranthene	102	340	ug/kg J	<
86-73-7	Fluorene	NÐ	340	ug/kg 🔾	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	68	ug/kg	
91-20-3	Naphthalene	ND	340	ug/kg	
90-12-0	1-Methylnaphthalene	ND	340	ug/kg	
91-57-6	2-Methylnaphthalene	ND	340	ug/kg 🗸	

101

88.9

340

340

ug/kg J

ug/kg J

Run#1 Run#2 Limits CAS No. Surrogate Recoveries 37-158% o-Terphenyl 86% 84-15-1 96% 59-149% 92-94-4 p-Terphenyl

(a) All hits confirmed by spectral match using a diode array detector.

Como 6127/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Phenanthrene

Pyrene

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-72'-Q3

Lab Sample ID:

F13055-4

Matrix: Method:

Project:

SO - Soil

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/29/02

Date Received: 05/01/02

Percent Solids: 93.1

File ID **Prep Batch Analytical Batch Prep Date** DF Analyzed By **OP5087 GAA493** Run #1 a AA010681.D 05/13/02 **MRE** 05/04/02

Run #2

Initial Weight

Run#1 31.0 g **Final Volume**  $5.0 \, ml$ 

Run #2

#### **Polynuclear Aromatic Hydrocarbons**

CAS No.	Compound	Result	RL	Units Q	Coole
83-32-9	Acenaphthene	ND	690	ug/kg U	
208-96-8	Acenaphthylene	ND	690	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg	
56-55-3	Benzo(a)anthracene	ND	350	ug/kg	
50-32-8	Benzo(a)pyrene	ND	69	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	69	ug/kġ	
191-24-2	Benzo(g,h,i)perylene	ND	69	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	69	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	69	ug/kg ∜	
206-44-0	Fluoranthene	108	350	ug/kg J	<
86-73-7	Fluorene	NĐ	350	ug/kg 🔾	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	69	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg 🗸	
85-01-8	Phenanthrene	107	<b>350</b>	ug/kg Ĵ	<
129-00-0	Pyrene	90.1	350	ug/kg J	~
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	84%		37-158%	
92-94-4	p-Terphenyl	88%	8 8 0	59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

cmo 6 67/02

**Analytical Batch** 

**GAA494** 

## Report of Analysis

Client Sample ID: 011-04-MP-30E-S-18'-Q3

Lab Sample ID:

F13055-5

SO - Soil

**Date Sampled:** 04/29/02 Date Received: 05/01/02

**Prep Date** 

05/04/02

Matrix: Method: Project:

EPA 8310 SW846 3550B NAS Whiting Field CTO-0011

By

MRE

Analyzed

05/14/02

Percent Solids: 87.6

**Prep Batch** 

OP5087

Run #1 a Run #2

DF

Run #1

Initial Weight 31.0 g

File ID

AA010707.D

Final Volume 5.0 ml

Run #2

Polynuclear	Aromatic	Hydrocarbons

Polynuclear Aromatic Hydrocarbons						
CAS No.	Compound	Result	RL	Units Q	Cerle	
83-32-9	Acenaphthene	1340	740	ug/kg =		
208-96-8	Acenaphthylene	ND	740	ug/kg 🗸		
120-12-7	Anthracene	249	370	ug/kg J	<	
56-55-3	Benzo(a)anthracene	225	370	ug/kg J	<	
50-32-8	Benzo(a)pyrene	130	<b>7</b> 4	ug/kg =		
205-99-2	Benzo(b)fluoranthene	75.7	74	ug/kg =		
191-24-2	Benzo(g,h,i)perylene	37.5	<b>74</b>	ug/kg J	<	
207-08-9	Benzo(k)fluoranthene	62.5	74	ug/kg J	<	
218-01-9	Chrysene	187	370	ug/kg J	<	
53-70-3	Dibenzo(a,h)anthracene	ND	<b>74</b>	ug/kg <b>U</b>		
206-44-0	Fluoranthene	687	370	ug/kg =		
86-73-7	Fluorene	1040	370	ug/kg =		
193-39-5	Indeno(1,2,3-cd)pyrene	44.3	74	ug/kg J	<	
91-20-3	Naphthalene	ND	370	ug/kg 🗸		
90-12-0	1-Methylnaphthalene	156	370	ug/kg J	Z	
91-57-6	2-Methylnaphthalene b	ND	740	ug/kg 🔰		
85-01-8	Phenanthrene	2170	370	ug/kg =		
129-00-0	Pyrene	574	370	ug/kg =		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	85%		37-158%		
92-94-4	p-Terphenyl	94%		59-149%		

(a) All hits confirmed by spectral match using a diode array detector.

(b) Elevated reporting limits due to matrix interference.

cmo6/27/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

By

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13055-6

Matrix: Method: SO - Soil

DF

1

EPA 8310 SW846 3550B

Date Sampled: 04/29/02

Date Received: 05/01/02

Λ

Percent Solids: 93.9

Project:

NAS Whiting Field CTO-0011

Analyzed

**Prep Date** 

**Analytical Batch** Prep Batch

**GAA493** 05/04/02 OP5087 05/13/02 MRE

Run #1 a Run #2

> **Initial Weight** Final Volume

Run #1

 $5.0 \, \mathrm{ml}$ 

Run #2

**Polynuclear Aromatic Hydrocarbons** 

File ID

30.8 g

AA010683.D

CAS No.	Compound	Result	RL	Units Q	Qual
	<u>-</u>			•	
83-32-9	Acenaphthene	ND	690	ug/kg 🔾	
208-96-8	Acenaphthylene	ND	690	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg ❖	
56-55-3	Benzo(a)anthracene	167	350	ug/kg J	<
50-32-8	Benzo(a)pyrene	83.5	69	ug/kg =	
205-99-2	Benzo(b)fluoranthene	64.3	69	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	47,7	69	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	56.6	69	ug/kg J	<
218-01-9	Chrysene	162	350	ug/kg J	<
53-70-3	Dibenzo(a,h)anthracene	ND.	69	ug/kg U	
206-44-0	Fluoranthene	574	350	ug/kg =	
86-73-7	Fluorene	ND	350	ug/kg ∪	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	69	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	NĐ	350	ug/kg ↓	
85-01-8	Phenanthrene	532	350	ug/kg ユ	
129-00-0	Pyrene	487	350	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	81%		37-158%	
92-94-4	p-Terphenyl	91%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

CANO GAT/UZ

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13055-7

Matrix:

AQ - Field Blank Soil

Method: Project:

EPA 8310 SW846 3510C

NAS Whiting Field CTO-0011

**Date Sampled:** 04/29/02

Date Received: 05/01/02 Percent Solids: n/a

	File ID	DF	Analyzed	Ву	<b>Prep Date</b>	Prep Batch	<b>Analytical Batch</b>
Run #1	AA010633.D	1	05/07/02	MRE	05/06/02	OP5089	GAA490

Run #2

Initial Volume Final Volume

Run #1 940 ml 1.0 ml

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.4	ug/l U
208-96-8	Acenaphthylene	ND	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/i
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/i
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/l ✓
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	56%		33-141%
92-94-4	p-Terphenyl	51%		31-122%

CMW 6/27/02

By

MRE

Client Sample ID: 011-04-PREEB-W-02-Q3

File ID

AA010634.D

Lab Sample ID:

F13055-8

Matrix:

AQ - Field Blank Soil

DF

Method: Project:

EPA 8310 SW846 3510C

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: n/a

NAS Whiting Field CTO-0011

Analyzed

05/07/02

05/06/02

Prep Date **Prep Batch Analytical Batch** OP5089

**GAA490** 

Run #1 Run #2

Initial Volume Final Volume 900 ml

Run #1

1.0 ml

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.4	ug/l U
208-96-8	Acenaphthylene	ND	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/l
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/i
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/l 🆑
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		33-141%
92-94-4	p-Terphenyl	69%		31-122%

Como 6/27/02

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13055-9

Matrix:

Method:

Project:

SO - Soil

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02 Date Received: 05/01/02

Percent Solids: 93.7

File ID DF Analyzed By **Prep Date** Prep Batch **Analytical Batch** 05/04/02 OP5087 **GAA493** AA010685.D **MRE** Run #1 a 1 05/13/02

Run #2

Final Volume Initial Weight

Run #1 30.5 g 5.0 ml

Run #2

**Polynuclear Aromatic Hydrocarbons** 

Polynuclear	· Aromatic Hydrocarbons				0 0
CAS No.	Compound	Result	RL	Units Q	Coole
83-32-9	Acenaphthene	ND	700	ug/kg U	
208-96-8	Acenaphthylene	ND	700	ug/kg \	
120-12-7	Anthracene	NÐ	350	ug/kg ♥	
56-55-3	Benzo(a)anthracene	113	350	ug/kg J	<
50-32-8	Benzo(a)pyrene	51.0	70	ug/kg J	<
205-99-2	Benzo(b)fluoranthene	36.7	70	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	ND	<b>7</b> 0	ug/kg U	
207-08-9	Benzo(k)fluoranthene	ND	70	ug/kg 🙀	
218-01-9	Chrysene	133	350	ug/kg J	<
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg 🔾	
206-44-0	Fluoranthene	404	350	ug/kg ڃ	
86-73-7	Fluorene	NĐ	350	ug/kg U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	70	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg ♥	
85-01-8	Phenanthrene	392	350	ug/kg =	
129-00-0	Pyrene	343	350	ug/kg J	て、
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	81%		37-158%	•
92-94-4	p-Terphenyl	88%		59-149%	,

(a) All hits confirmed by spectral match using a diode array detector.

cmo6/27/02

B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence and free amound

By

MRE

Client Sample ID: 011-04-MP-FD1-S-100'-Q3

Lab Sample ID: Matrix:

F13055-10

SO - Soil

EPA 8310 SW846 3550B

DF

1

Project:

File ID

AA010686.D

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

05/04/02

Date Received: 05/01/02 Percent Solids: 91.3

**Analytical Batch Prep Date Prep Batch** 

**GAA493** 

**OP5087** 

Run #1 a Run #2

Method:

Final Volume Initial Weight

Run #1 30.7 g 5.0 ml

Run #2

Polynuclea	r Aromatic Hydrocarbons				$\circ$
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	268	710	ug/kg J	<
208-96-8	Acenaphthylene	ND	710	ug/kg U	
120-12-7	Anthracene	279	360	ug/kg J	<
56-55-3	Benzo(a)anthracene	324	<b>360</b>	ug/kg J	<
50-32-8	Benzo(a)pyrene	142	71	ug/kg =	
205-99-2	Benzo(b)fluoranthene	96.2	71	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	49,2	71	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	82.2	71	ug/kg =	
218-01-9	Chrysene	308	360	ug/kg J	~
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg 🖊	
206-44-0	Fluoranthene	1380	360	ug/kg =	
86-73-7	Fluorene	272	360	ug/kg J	<
193-39-5	Indeno(1,2,3-cd)pyrene	43.4	71	ug/kg J	<
91-20-3	Naphthalene	ND	360	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg ✔	
85-01-8	Phenanthrene	1400	360	ug/kg =	
129-00-0	Pyrene	1170	360	ug/kg 👱	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	91%		37-158%	
92-94-4	p-Terphenyl	100%		<b>59-149%</b>	

Analyzed

05/13/02

(a) All hits confirmed by spectral match using a diode array detector.

cmuo 6/27/02

ND = Not detected

RL = Reporting Limit

E - Indicatar value avacade nelibration rance

J = Indicates an estimated value <math>0049

B = Indicates analyte found in associated method blank

M - Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-05N-S-18'-Q3

Lab Sample ID:

F13055-11

Matrix:

SO - Soil

30.6 g

EPA 8310 SW846 3550B

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 87.6

Method: Project:

NAS Whiting Field CTO-0011

**Analytical Batch Prep Batch Prep Date** File ID DF Analyzed By 05/04/02 OP5087 **GAA494** 05/14/02 MRE Run #1 a AA010708.D 1

Run #2

Final Volume Initial Weight

Run #1

5.0 ml

Run #2

Polynuclear Aromatic Hydrocarbons					
CAS No.	Compound	Result	RL	Units Q	Cede
83-32-9	Acenaphthene	1430	750	ug/kg =	
208-96-8	Acenaphthylene	ND	750	ug/kg <b>U</b>	
120-12-7	Anthracene	236	<b>370</b>	ug/kg J	•
56-55-3	Benzo(a)anthracene	210	370	ug/kg J	<
50-32-8	Benzo(a)pyrene	116	<b>75</b>	ug/kg =	
205-99-2	Benzo(b)fluoranthene	68.5	<b>75</b>	ug/kg J	<
191-24-2	Benzo(g,h,i)perylene	31.7	<i>7</i> 5	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	50.7	75	ug/kg J	<
218-01-9	Chrysene	248	370	ug/kg J	<
53-70-3	Dibenzo(a,h)anthracene	ND	<i>7</i> 5	ug/kg 🗸	
206-44-0	Fluoranthene	619	370	ug/kg ≃	
86-73-7	Fluorene	1040	370	ug/kg =	
193-39-5	Indeno(1,2,3-cd)pyrene	37.9	<i>7</i> 5	ug/kg J	<
91-20-3	Naphthalene	ND	370	ug/kg U	
90-12-0	1-Methylnaphthalene	187	370	ug/kg J	<
91-57-6	2-Methylnaphthalene b	ND	740	ug/kg 🗸	
85-01-8	Phenanthrene	2060	370	ug/kg 🛨	
129-00-0	Pyrene	517	370	ug/kg =	
CAS No.	Surrogate Recoveries	Run#1	Run# 2	Limits	
84-15-1	o-Terphenyl	88%		37-158%	
92-94-4	p-Terphenyl	94%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

(b) Elevated reporting limits due to matrix interference.

CMMO 6/27/02

0053

Client Sample ID: 011-04-MP-05N-S-38'-Q3

Lab Sample ID:

F13055-12

SO - Soil

EPA 8310 SW846 3550B

**Date Sampled: 04/30/02** 

Date Received: 05/01/02

Percent Solids: 90.4

Method: Project:

Matrix:

NAS Whiting Field CTO-0011

**Analytical Batch Prep Date Prep Batch** File ID DF Analyzed By Run #1 a AA010690.D 1 05/13/02 MRE 05/04/02 **OP5087 GAA493** 

Run #2

Initial Weight Final Volume

Run #1 30.8 g 5.0 ml

Run #2

Polynuclear Aromatic Hydrocarbons					Chil
CAS No.	Compound	Result	RL	Units Q	Cide
83-32-9	Acenaphthene	ND	720	ug/kg U	
208-96-8	Acenaphthylene	ND	720	ug/kg U	
120-12-7	Anthracene	298	360	ug/kg J	2
56-55-3	Benzo(a)anthracene	426	360	ug/kg =	
50-32-8	Benzo(a)pyrene	190	72	ug/kg =	
205-99-2	Benzo(b)fluoranthene	125	<b>72</b>	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	73.9	72	ug/kg =	
207-08-9	Benzo(k)fluoranthene	108	72	ug/kg ≠	
218-01-9	Chrysene	369	360	ug/kg =	
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg 🔾	
206-44-0	Fluoranthene	1670	360	ug/kg =	
86-73-7	Fluorene	234	360	ug/kg J	<
193-39-5	Indeno(1,2,3-cd)pyrene	55.9	72	ug/kg J	<
91-20-3	Naphthalene	ND	360	ug/kg 🔾	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg 🖖	
85-01-8	Phenanthrene	1500	360	ug/kg ェ	
129-00-0	Pyrene	1430	360	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	94%		37-158%	
92-94-4	p-Terphenyl	110%	** **	59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

cmo6/27/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidentain acompound

Client Sample ID: 011-04-MP-05N-S-66'-Q3

Lab Sample ID:

F13055-13

DF

1

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 90.5

**Prep Date** 

Run #1 a

File ID AA010691.D

Analyzed 05/13/02

By **MRE** 

05/04/02

**Prep Batch** OP5087

**Analytical Batch** 

**GAA493** 

Run #2

**Initial Weight Final Volume** 

Run #1

 $5.0 \, ml$ 

Run #2

Polynuclear Aromatic Hydrocarbons

31.2 g

CAS No.	Compound	Result	RL	Units Q	Cede
83-32-9	Acenaphthene	ND	710	ug/kg U	
208-96-8	Acenaphthylene	NĐ	710	ug/kg 4	
120-12-7	Anthracene	164	350	ug/kg J	<
56-55-3	Benzo(a)anthracene	305	350	ug/kg J	<
50-32-8	Benzo(a)pyrene	135	71	ug/kg =	
205-99-2	Benzo(b)fluoranthene	91.4	71	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	48.8	71	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	80.4	71	ug/kg =	
218-01-9	Chrysene	292	350	ug/kg J	<
53-70-3	Dibenzo(a,h)anthracene	ND	<b>71</b>	ug/kg 🔾	
206-44-0	Fluoranthene	968	350	ug/kg =	
86-73-7	Pluorene	99.3	350	ug/kg J	<
193-39-5	Indeno(1,2,3-cd)pyrene	35.8	71	ug/kg J	Ž
91-20-3	Naphthalene	ND	350	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg	
85-01-8	Phenanthrene	749	350	ug/kg 💂	
129-00-0	Pyrene	828	350	ug/kg =	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	85%		37-158%	
92-94-4	p-Terphenyl	97%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

cmo 6 67/02

0061

ND = Not detected

RL = Reporting Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

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By

MRE

Client Sample ID: 011-04-MP-10W-S-18'-Q3

Lab Sample ID:

File ID

31.8 g

AA010711.D

F13055-14

SO - Soil

Date Sampled: 04/30/02

Matrix: Method:

EPA 8310 SW846 3550B

Date Received: 05/01/02

 $\cap$ 

0

Percent Solids: 89.0

05/04/02

Project:

NAS Whiting Field CTO-0011

Analyzed

05/14/02

**Prep Date** 

**Analytical Batch Prep Batch** OP5087

GAA494

Run #1 a Run #2

> **Final Volume Initial Weight**

Run #1

 $5.0 \, \mathrm{ml}$ 

DF

1

Run #2

**Polynuclear Aromatic Hydrocarbons** 

1 Orymucical	Ai omatic Hydrocar bons				(Disc)
CAS No.	Compound	Result	RL	Units Q	Cede
83-32-9	Acenaphthene	ND	710	ug/kg U	
208-96-8	Acenaphthylene	ND	710	ug/kg \	
120-12-7	Anthracene	ND	350	ug/kg ↓	
56-55-3	Benzo(a)anthracene	47.4	350	ug/kg J	<
50-32-8	Benzo(a)pyrene	ND	71	ug/kg U	
205-99-2	Benzo(b)fluoranthene	ND	71	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	71	ug/kg	•
207-08-9	Benzo(k)fluoranthene	ND	71	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg ♥	
206-44-0	Fluoranthene	120	350	ug/kg J	<
86-73-7	Fluorene	ND	350	ug/kg 🗽	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	<b>350</b>	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg ₩	
85-01-8	Phenanthrene	82.0	350	ug/kg J	
129-00-0	Pyrene	102	350	ug/kg J	
CAS No.	. Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	85%		37-158%	
92-94-4	p-Terphenyl	92%		59-149%	
·	Lhuan).	<b>500700</b>	87	/-	

(a) All hits confirmed by spectral match using a diode array detector.

Cm06/27/62

Client Sample ID: 011-04-MP-10W-S-43'-Q3

Lab Sample ID:

F13055-15

Matrix: Method: SO - Soil

EPA 8310 SW846 3550B

**Date Sampled:** 04/30/02 Date Received: 05/01/02

Percent Solids: 94.0

Project: NAS Whiting Field CTO-0011

File ID DF Analyzed By **Prep Date Prep Batch Analytical Batch** Run#1 a AA010694.D 1 05/13/02 MRE 05/04/02 OP5087 **GAA493** 

Run #2

Initial Weight **Final Volume** 

Run#1

30.5 g

 $5.0 \, ml$ 

Run #2

Polynuclear Aromatic Hydrocarbons					
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	ND	700	ug/kg U	
208-96-8	Acenaphthylene	ND	700	ug/kg	
120-12-7	Anthracene	ND	350	ug/kg ↓	
56-55-3	Benzo(a)anthracene	73.1	350	ug/kg J	<
50-32-8	Benzo(a)pyrene	ND	70	ug/kg 从	
205-99-2	Benzo(b)fluoranthene	ND	70	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	<b>7</b> 0	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	<i>7</i> 0	ug/kg	
218-01-9	Chrysene	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	70	ug/kg √	
206-44-0	Fluoranthene	254	350	ug/kg J	<
86-73-7	Fluorene	ND	350	ug/kg U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	70	ug/kg	
91-20-3	Naphthalene	ND	350	ug/kg	
90-12-0	1-Methylnaphthalene	ND	350	ug/kg	
91-57-6	2-Methylnaphthalene	ND	350	ug/kg ♥	
85-01-8	Phenanthrene	155	350	ug/kg J	<b>x</b> <
129-00-0	Pyrene	224	350	ug/kg J	<
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	77%		37-158%	
92-94-4	p-Terphenyl	89%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

CMW0 6/27/02

0069

ND = Not detected

RL = Reporting Limit

F = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-10W-S-72'-Q3

Lab Sample ID:

F13055-16

**Date Sampled:** 04/30/02

Matrix: Method: SO - Soil

Date Received: 05/01/02

EPA 8310 SW846 3550B

Percent Solids: 92.2

Project:

NAS Whiting Field CTO-0011

**Prep Batch Analytical Batch** 

**GAA493** 

**Prep Date** File ID DF Analyzed By OP5087 Run#1ª AA010695.D 1 05/13/02 MRE 05/04/02

Run #2

**Final Volume Initial Weight** 

Run #1

30.3 g

5.0 ml

Run #2

Polynuclea	r Aromatic Hydrocarbons				Quel
CAS No.	Compound	Result	RL	Units Q	Code
83-32-9	Acenaphthene	ND	720	ug/kg U	
208-96-8	Acenaphthylene	ND	720	ug/kg U	
120-12-7	Anthracene	230	360	ug/kg J	<
<b>56-55-3</b>	Benzo(a)anthracene	349	360	ug/kg J	<
50-32-8	Benzo(a)pyrene	173	<b>72</b>	ug/kg =	
205-99-2	Benzo(b)fluoranthene	105	72	ug/kg =	
191-24-2	Benzo(g,h,i)perylene	46.2	72	ug/kg J	<
207-08-9	Benzo(k)fluoranthene	83.8	72	ug/kg =	
218-01-9	Chrysene	420	360	ug/kg =	
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg U	
206-44-0	Fluoranthene	1210	360	ug/kg =	
86-73-7	Fluorene	141	360	ug/kg J	
193-39-5	Indeno(1,2,3-cd)pyrene	40.2	<b>72</b>	ug/kg J	
91-20-3	Naphthalene	ND	360	ug/kg U	
90-12-0	1-Methylnaphthalene	ND	360	ug/kg \	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg	•
85-01-8	Phenanthrene	1000	360	ug/kg =	
129-00-0	Pyrene	1040	360	ug/kg *	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	86%		37-158%	
92-94-4	p-Terphenyl	102%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

cm106/27/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-FD2-S-100'-Q3

Lab Sample ID:

F13055-17

SO - Soil

**Date Sampled:** 04/30/02

Matrix: Method:

EPA 8310 SW846 3550B

DF

1

Date Received: 05/01/02 Percent Solids: 89.3

Project:

NAS Whiting Field CTO-0011

Prep Date Prep Batch Analytical Batch

Run #1 a AA010712.D

05/14/02

Analyzed

By Prep Dat MRE 05/04/02

Prep Batch OP5087 Analytical Batch GAA494

Run #2

Initial Weight

30.6 g

File ID

Final Volume 5.0 ml

Run #1 Run #2

Polynuclear Aromatic Hydrocarbons					Que
CAS No.	Compound	Result	RL	Units Q	Cide
83-32-9	Acenaphthene	ND	730	ug/kg U	
208-96-8	Acenaphthylene	ND	<b>73</b> 0	ug/kg \	
120-12-7	Anthracene	ND	370	ug/kg 🕈	
56-55-3	Benzo(a)anthracene	42.7	370	ug/kg J	<
50-32-8	Benzo(a)pyrene	ND	<b>73</b>	ug/kg 👢	
205-99-2	Benzo(b)fluoranthene	ND	73	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	<b>73</b>	ug/kg	
218-01-9	Chrysene	ND	370	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	<b>73</b>	ug/kg ₩	
206-44-0	Fluoranthene	113	370	ug/kg J	<
86-73-7	Fluorene	ND	370	ug/kg U	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	73	ug/kg	
91-20-3	Naphthalene	ND	370	ug/kg	
90-12-0	1-Methylnaphthalene	ND	370	ug/kg	
91-57-6	2-Methylnaphthalene	ND	370	ug/kg 🗸	
85-01-8	Phenanthrene	85.7	<b>370</b>	ug/kg J	<
129-00-0	Pyrene	96.3	370	ug/kg J	Ż.
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

(a) All hits confirmed by spectral match using a diode array detector.

CMUO 6/27/02

84-15-1

92-94-4

o-Terphenyl

p-Terphenyl

37-158%

59-149%

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13055-18

Matrix:

AQ - Field Blank Soil

Method: Project:

EPA 8310 SW846 3510C NAS Whiting Field CTO-0011 Date Sampled: 04/30/02

Date Received: 05/01/02

Analyzed

05/07/02

Percent Solids: n/a

File ID DF

AA010635.D 1 By MRE **Prep Date** 05/06/02

**Analytical Batch Prep Batch** OP5089

**GAA490** 

Run #1 Run #2

> Initial Volume **Final Volume**

Run #1

1.0 ml

Run #2

#### Polynuclear Aromatic Hydrocarbons

890 ml

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	NĐ	4.4	ug/l U
208-96-8	Acenaphthylene	NĐ	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/l
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/i
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/l 🌾
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		33-141%
92-94-4	p-Terphenyl	77%		31-122%

cmod on/cz

Client Sample ID: 011-04-PREEB-W-03-Q3

Lab Sample ID:

F13066-1

Matrix:

AQ - Field Blank Water EPA 8310 SW846 3510C

DF

1

Method: Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02 Percent Solids: n/a

Run #1

File ID AA010645.D

Analyzed 05/07/02

By MRE **Prep Date** 05/06/02

**Prep Batch** OP5089

**Analytical Batch** 

GAA490

Run #2

Initial Volume Final Volume

Run #1

1.0 ml

Run #2

#### Polynuclear Aromatic Hydrocarbons

900 ml

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	<b>4.4</b>	ug/l 너
208-96-8	Acenaphthylene	ND	4.4	ug/i
120-12-7	Anthracene	ND	2.2	ug/l
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l
205-99-2	Benzo(b)fluoranthene	ΝĎ	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	NĐ	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	NĎ	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	NĎ	2.2	ug/l ↓
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%	*	33-141%
92-94-4	p-Terphenyl	74%		31-122%

como 6 boloz

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-20S-S-18'-Q3

Lab Sample ID:

F13066-2

Matrix: Method:

SO - Soil

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: 87.8

Project:

Run #1

File ID AA010697.D DF 1

Analyzed 05/14/02

By MRE **Prep Date** 05/04/02

**Prep Batch** 

**Analytical Batch** 

Page 1 of 1

OP5087 **GAA493** 

Run #2

Initial Weight

Run #1 30.6 g **Final Volume** 5.0 ml

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	$\mathbf{RL}$	Units Q
83-32-9	Acenaphthene	ND	740	ug/kg U
208-96-8	Acenaphthylene	ND	740	ug/kg
120-12-7	Anthracene	ND	370	ug/kg
56-55-3	Benzo(a)anthracene	ND	370	ug/kg
50-32-8	Benzo(a)pyrene	ND	74	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	74	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND	74	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	<b>74</b>	ug/kg
218-01-9	Chrysene	ND	370	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	74	ug/kg
206-44-0	Fluoranthene	ND	370	ug/kg
86-73-7	Fluorene	ND	370	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	74	ug/kg
91-20-3	Naphthalene	ND	370	ug/kg
90-12-0	1-Methylnaphthalene	ND	370	ug/kg
91-57-6	2-Methylnaphthalene	ND	370	ug/kg
85-01-8	Phenanthrene	ND	370	ug/kg
129-00-0	Pyrene	ND	370	ug/kg ¥
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		37-158%
92-94-4	p-Terphenyl	97%		59-149%

cm106/20102

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13066-3

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: 91.1

File ID DF Analyzed **Prep Date Analytical Batch** By **Prep Batch** AA010698.D Run #1 1 05/14/02 **MRE** 05/04/02 OP5087 **GAA493** 

Run #2

**Initial Weight Final Volume** 

Run #1 30.5 g 5.0 ml

Run #2

#### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	720	ug/kg U
208-96-8	Acenaphthylene	NĐ	720	ug/kg
120-12-7	Anthracene	ND	360	ug/kg
56-55-3	Benzo(a)anthracene	ND	360	ug/kg
50-32-8	Benzo(a)pyrene	ND	72	ug/kg
205-99-2	Benzo(b)fluoranthene	ND	72	ug/kg
191-24-2	Benzo(g,h,i)perylene	ND	<b>72</b>	ug/kg
207-08-9	Benzo(k)fluoranthene	ND	72	ug/kg
218-01-9	Chrysene	ND	360	ug/kg
53-70-3	Dibenzo(a,h)anthracene	ND	72	ug/kg
206-44-0	Fluoranthene	ND	360	ug/kg
86-73-7	Fluorene	ND	360	ug/kg
193-39-5	Indeno(1,2,3-cd)pyrene	ND	72	ug/kg
91-20-3	Naphthalene	ND	360	ug/kg
90-12-0	1-Methylnaphthalene	ND	360	ug/kg
91-57-6	2-Methylnaphthalene	ND	360	ug/kg
85-01-8	Phenanthrene	ŇD	360	ug/kg
129-00-0	Pyrene	ND	360	ug/kg ♥
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		37-158%
92-94-4	p-Terphenyl	94%		59-149%

CM10/92/02

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13066-4

Matrix:

SO - Soil

Method: Project:

EPA 8310 SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: 93.2

File ID DF Analyzed By **Prep Date Analytical Batch Prep Batch** Run #1 a AA010699.D 1 05/14/02 **MRE** 05/04/02 OP5087 **GAA493** 

Run #2

Initial Weight **Final Volume** 

Run #1 30.2 g 5.0 ml

Run #2

Polynuclear Aromatic Hydrocarbons					
CAS No.	Compound	Result	RL	Units Q	ales
83-32-9	Acenaphthene	ND	710	ug/kg U	
208-96-8	Acenaphthylene	ND	710	ug/kg	
120-12-7	Anthracene	ND	360	ug/kg ₹	
56-55-3	Benzo(a)anthracene	64.3	360	ug/kg J	<
50-32-8	Benzo(a)pyrene	ND	71	ug/kg U	
205-99-2	Benzo(b)fluoranthene	ND	71	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	71	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	71	ug/kg	•
218-01-9	Chrysene	ND	360	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	71	ug/kg ₩	
206-44-0	Fluoranthene	212	360	ug/kg J	<
86-73-7	Fluorene	ND	360	ug/kg u	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	71	ug/kg	
91-20-3	Naphthalene	ND	360	ug/kg	
90-12-0	1-Methylnaphthalene	ND.	360	ug/kg	
91-57-6	2-Methylnaphthalene	ND	360	ug/kg	•
85-01-8	Phenanthrene	160	360	ug/kg J	<
129-00-0	Pyrene	167	360	ug/kg J	~
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
84-15-1	o-Terphenyl	79%		37-158%	
92-94-4	p-Terphenyl	89%		59-149%	

(a) All hits confirmed by spectral match using a diode array detector.

cmo 6/20/02

B = Indicates analyte found in associated method blank Tidtiai ii ii it ii ee

By

**MRE** 

Client Sample ID: 011-04-POSTEB-W-01-Q3

File ID

Lab Sample ID:

F13066-5

Matrix:

AQ - Field Blank Water EPA 8310 SW846 3510C

DF

1

Method: Project:

**Date Sampled:** 05/01/02

Date Received: 05/02/02

**OP5089** 

Percent Solids: n/a

NAS Whiting Field CTO-0011

Analyzed

05/07/02

**Prep Date** 

05/06/02

**Prep Batch Analytical Batch** 

**GAA490** 

Run #1 Run #2

AA010647.D

Initial Volume Final Volume 920 ml

Run #1 Run #2

1.0 ml

### Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	Units Q
83-32-9	Acenaphthene	ND	4.4	ug/l U
208-96-8	Acenaphthylene	ND	4.4	ug/l
120-12-7	Anthracene	ND	2.2	ug/i
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l
218-01-9	Chrysene	ND	2.2	ug/l
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l
206-44-0	Fluoranthene	ND	2.2	ug/l
86-73-7	Fluorene	ND	2.2	ug/l
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/I
91-20-3	Naphthalene	ND	2.2	ug/l
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l
85-01-8	Phenanthrene	ND	2.2	ug/l
129-00-0	Pyrene	ND	2.2	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		33-141%
92-94-4	p-Terphenyl	72%		31-122%
	LK		8	J1-12270

Como Corloz

ND = Not detected

RL = Reporting Limit

F - Indicator value avacade calibration was an

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

NT ... Yandinakan manamatan ... ... + 3

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#### PAH ORGANIC ANALYSIS DATA SHEET

	EPA Sample No.
Lab Name: PEL Laboratories, Inc.	Contract: Whiting Fld 16PREEBEB01
Lab Code : PEL Case No.	SAS No: SDG No.: 2204044
Matrix: WATER	Lab Sample ID: 220404401 Lab File ID: 44-1,D
Sample wt/vol: 960 Units: ML	Date Received: 05/14/02
Concentrated Extract Volume: 1	Date Extracted: 05/14/02
Level:(low/med) LOW	Date Analyzed: 05/15/02 Time: 0949
PercentSolids: 0 decanted :	Dilution Factor: 1
Extraction: SEPF	Station ID: Pre Equipment R Method: 8310
GPC Cleanup: (Y/N) N pH:	- All Property and All
Column(1): Vydac 201TP54 ID: 4.6	(mm)
CONCENTRATION UNITS: LIGIT	

CAS NO.	ANALYTE	RESULT	Q
91-20-3	Naphthalene	0.21	U
208-96-8	Acenaphthylene	0.21	U
90-12-0	1-Methylnaphthalene	0.21	U
91-57-6	2-Methylnaphthalene	0.21	U
83-32-9	Acenaphthene	0.21	U
86-73-7	Fluorene	0.21	U
85-01-8	Phenanthrene	0.21	U
120-12-7	Anthracene	0.21	υ
206-44-0	Fluoranthene	0.21	บ
129-00-0	Pyrene	0.21	U
56-55-3	Benzo(a)anthracene	0.21	U
218-01-9	Chrysene	0.21	U
205-99-2	Benzo(b)fluoranthene	0.21	U
207-08-9	Benzo(k)fluoranthene	0.21	U
50-32-8	Benzo(a)pyrene	0.21	υ
53-70-3	Dibenz(a,h)anthracene	0.21	U
191-24-2	Benzo(g,h,i)perylene	0.21	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	U

mo 6/27/02

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 01116CSS01 Contract: Whiting Fld Lab Name: PEL Laboratories, Inc. SDG No.: 2204044 Lab Code: Case No. SAS No: Lab File ID: 44-2.D Lab Sample ID: 220404402 SOIL Matrix: 05/14/02 33.09 Units: G Date Received: Sample wt/vol: Date Extracted: 05/15/02 Concentrated Extract Volume: Level:(low/med) LOW Date Analyzed: 05/23/02 Time: 2317 PercentSolids: 90.9 decanted: Dilution Factor: Extraction: SONC Station ID: Bottom Confirm. Method: 8310 GPC Cleanup: (Y/N) \_ pH: N ID: 4.6 Column(1): Vydac 201TP54 (mm) CONCENTRATION UNITS: UG/KG Q RESULT CAS NO. **ANALYTE** U 6.7 91-20-3 Naphthalene 6.7 U 208-96-8 Acenaphthylene υ 90-12-0 1-Methylnaphthalene 6.7 6.7 U 91-57-6 2-Methylnaphthalene U 6.7 83-32-9 Acenaphthene U 6.7 86-73-7 Fluorene 9.7 85-01-8 Phenanthrene U 6.7 Anthracene 120-12-7 = 40.4 206-44-0 Fluoranthene 129-00-0 Pyrene 18.4 = 17.9 Benzo(a)anthracene 56-55-3 = Chrysene 16.2 218-01-9 18.3 205-99-2 Benzo(b)fluoranthene J 6.5 207-08-9 Benzo(k)fluoranthene 137 50-32-8 Benzo(a)pyrene 6.7 U Dibenz(a,h)anthracene 53-70-3 22.1 Benzo(g,h,i)perylene 191-24-2 15.1 Indeno(1,2,3-cd)pyrene 193-39-5

cmo 6/27/02

### PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No. 01116CSS02 Lab Name: PEL Laboratories, Inc. Contract: Whiting Fld SDG No.: 2204044 Lab Code: Case No. SAS No: Matrix: SOIL Lab Sample ID: 220404403 Lab File ID: 44-3.D Date Received: 05/14/02 Sample wt/vol: 33.09 Units: G Date Extracted: 05/15/02 Concentrated Extract Volume: Level:(low/med) LOW Time: 2351 Date Analyzed: 05/23/02 decanted: PercentSolids: 92.7 Dilution Factor: Extraction: SONC 8310 Station ID: Bottom Confirm. Method: GPC Cleanup: (Y/N) pH: N Column(1): Vydac 201TP54 ID: 4.6 (mm) CONCENTRATION UNITS: UG/KG Q CAS NO. **ANALYTE** RESULT U 91-20-3 Naphthalene 6.6 208-96-8 Acenaphthylene 6.6 U 6.6 U 90-12-0 1-Methylnaphthalene U 91-57-6 2-Methylnaphthalene 6.6 U Acenaphthene 6.6 83-32-9 U 86-73-7 Fluorene 6.6 6.6 U 85-01-8 Phenanthrene 120-12-7 Anthracene 206-44-0 Fluoranthene 112 86.1 129-00-0 Pyrene 36.7 56-55-3 Benzo(a)anthracene 218-01-9 Chrysene 43 205-99-2 Benzo(b)fluoranthene 61.7 27.3 207-08-9 Benzo(k)fluoranthene 50-32-8 Benzo(a)pyrene 169 53-70-3 Dibenz(a,h)anthracene 23.8 63.7 Benzo(g,h,i)perylene 191-24-2 193-39-5 Indeno(1,2,3-od)pyrene 70.3

CMO 6/24/02

Client Sample ID: 011-04-PREEB-W-01-Q1

Lab Sample ID:

F11289-1

Matrix:

AQ - Ground Water

FLORIDA-PRO SW846 3510C

Method: Project:

NAS Whiting Field CTO-0011

Date Sampled:

55-130%

10/22/01

Date Received: 10/23/01

Percent Solids: n/a

,							
1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
n #1 a		1	10/30/01	ME	10/29/01	OP4084	GOP681
Run #1 a	OP17926.D	i	10/30/01	IATI	10/25/01	O1 1001	001001

Run #2

Result RL Units Q Compound CAS No.

TPH (C8-C40)

**0.25** mg/l ND

**Run#2** Limits Run#1 CAS No. **Surrogate Recoveries** 

105% 84-15-1 o-Terphenyl

(a) Sample not preserved, adjusted to pH < 2 prior to extraction.

omes 6/201/02

Page 1 of 1

Client Sample ID: 011-04-BKGD-S-22'-Q1

Lab Sample ID: Matrix:

F11289-2

SO - Soil Method:

FLORIDA-PRO SW846 3550B

**Date Sampled:** 10/22/01 Date Received:

10/23/01

Percent Solids: 86.1

Project:

NAS Whiting Field CTO-0011

DF

1

**Prep Date** 

**Prep Batch** 

**Analytical Batch** 

Run #1 Run #2 File ID OP18050.D Analyzed 11/03/01

By SKW

11/02/01

OP4117

**GOP684** 

CAS No.

Compound

Result

RL Units Q

TPH (C8-C40)

ND 9.1

mg/kg U

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

73%

66-130%

0mmo 6/28/c2

Client Sample ID: 011-04-BKGD-S-43'-Q1

Lab Sample ID:

F11289-3

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 10/22/01

Date Received: 10/23/01 Percent Solids: 94.7

**Analytical Batch Prep Date Prep Batch** Analyzed By DF File ID **GOP684** SKW 11/02/01 **OP4117** 11/03/01 1 OP18051.D Run #1

Run #2

CAS No. Compound Result

RL Units Q

TPH (C8-C40)

11.2 8.7

mg/kg

**Surrogate Recoveries** CAS No.

Run#1 Run# 2 Limits

84-15-1

o-Terphenyl

82%

66-130%

CMUD 6/20/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-30E-S-18'-Q1

Lab Sample ID:

F11289-4

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: 10/22/01 Date Received: 10/23/01

Percent Solids: 90.5

**Analytical Batch Prep Batch Prep Date** By DF **Analyzed** File ID OP4117 **GOP684** SKW 11/02/01 11/03/01 1 OP18052.D Run #1

Run #2

Compound CAS No.

Result

RL Units Q

TPH (C8-C40)

25.1 9.4

mg/kg

CAS No.

**Surrogate Recoveries** 

Run# 1

Run#2

Limits

84-15-1

o-Terphenyl

81%

66-130%

0mmo 6/00/02

Client Sample ID: 011-04-MP-30E-S-30'-Q1

Lab Sample ID:

F11289-5

Matrix: Method: SO - Soil FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 10/22/01

Date Received: 10/23/01

Percent Solids: 90.4

Run #1	File ID OP18053.D	<b>DF</b>	<b>Analyzed</b> 11/03/01	By SKW	Prep Date 11/02/01	Prep Batch OP4117	Analytical Batch GOP684	
Run #2								_

CAS No.	Compound	Result RL	, Units Q
	TPH (C8-C40)	29.9 8.7	mg/kg
CAS No.	Surrogate Recoveries	Run# 1 Ru	n#2 Limits
84-15-1	o-Terphenyl	91%	66-130%



Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-43'-Q1

Lab Sample ID: Matrix:

F11289-6

Method: Project:

SO - Soil FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 10/22/01 Date Received: 10/23/01

Percent Solids: 93.5

**Analytical Batch Prep Batch Prep Date** Analyzed By DF File ID **GOP684** 11/02/01 OP4117 **SKW** 11/03/01 1 OP18054.D Run #1

Run #2

Compound

Result

RL

Units Q

CAS No.

TPH (C8-C40)

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

ND 9.1

Run#2

Limits

84-15-1

o-Terphenyl

83%

66-130%

omes 6/28/02

Client Sample ID: 011-04-POSTEB-W-01-Q1

Lab Sample ID:

F11289-7

Matrix:

AO - Ground Water

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled:

55-130%

10/22/01

Date Received: 10/23/01

Percent Solids: n/a

**Analytical Batch Prep Batch Prep Date** Analyzed By DF File ID GOP681 10/29/01 **OP4084** 10/30/01 ME Run #1 a OP17927.D 1

Run #2

Units Q RL Result Compound CAS No.

TPH (C8-C40)

0.28 mg/l ND

Run# 2 Run#1 CAS No. **Surrogate Recoveries** 

Limits

100% 84-15-1 o-Terphenyl

(a) Sample not preserved, adjusted to pH < 2 prior to extraction.

CMD 6/28/02

Page 1 of 1

Client Sample ID: 011-04-PREEB-W-02-Q1

Lab Sample ID:

F11298-2

Matrix:

AQ - Field Blank Water

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

**Date Sampled:** 10/23/01

Date Received: 10/24/01

Percent Solids: n/a

File ID DF Analyzed By Prep Date **Prep Batch Analytical Batch** Run #1 ZF03433.D 1 10/29/01 **SKW** 10/29/01 OP4075 **GZF161** 

Run #2

Compound

Result

CAS No.

Run#1

RL

Units Q

mg/l

CAS No.

TPH (C8-C40) Surrogate Recoveries ND 0.25

Run#2

Limits

84-15-1

o-Terphenyl

95%

55-130%

cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-72'-Q1

Lab Sample ID:

Matrix:

F11298-3

SO - Soil

FLORIDA-PRO SW846 3550B

By

**SKW** 

**Date Sampled:** 10/23/01

Date Received: 10/24/01

**Prep Batch** 

**OP4117** 

Percent Solids: 92.2

Method: Project:

NAS Whiting Field CTO-0011

DF

1

**Analytical Batch** 

Run #1 Run #2

CAS No.

OP18055.D

File ID

Result

Analyzed

11/03/01

RL

Units Q

**Prep Date** 

11/02/01

**GOP684** 

Compound

TPH (C8-C40)

15.8

8.8

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

86%

66-130%

Omno 6/2002

Client Sample ID: 011-04-BKGD-S-72'-Q1

Lab Sample ID:

F11298-4

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B

**Date Sampled:** 10/23/01

Date Received: 10/24/01

Percent Solids: 92.1

NAS Whiting Field CTO-0011 Project:

Run #1

File ID OP18057.D

Analyzed DF 11/03/01 1

By SKW **Prep Date** 11/02/01

**Prep Batch** OP4117

**Analytical Batch** 

**GOP684** 

Run #2

Compound

Result

RL

Units Q

CAS No.

TPH (C8-C40)

11.7 8.8

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

92%

66-130%

crimo apoloz

Client Sample ID: 011-04-MP-10N-S-18-Q1

Lab Sample ID: Matrix:

F11298-5

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/23/01 **Date Received:** 10/24/01

Percent Solids: 87.2

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 OP18058.D 1 11/03/01 SKW 11/02/01 OP4117 GOP684

Run #2

Method:

Project:

CAS No. Compound Result RL Units Q

TPH (C8-C40)

116 9.8 mg/kg

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

84-15-1 o-Terphenyl 95% 66-130%

cmis 6/20/02

Client Sample ID: 011-04-MP-10N-S-38-Q1

Lab Sample ID:

F11298-6

Matrix:

Project:

Method:

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

DF

1

**Date Sampled:** 10/23/01

Date Received: 10/24/01

Percent Solids: 90.2

Run #1

File ID OP18059.D Analyzed 11/03/01

By **Prep Date** 11/02/01 **SKW** 

**Prep Batch OP4117** 

**Analytical Batch GOP684** 

Run #2

CAS No.

Result

RL

Units Q

Compound

TPH (C8-C40)

16.0 9.4

mg/kg

CAS No.

**Surrogate Recoveries** 

Run# 1

Run#2

Limits

84-15-1

o-Terphenyl

88%

66-130%

cmo 6/28/02

Client Sample ID: 011-04-POSTEB-W-02-Q1

Lab Sample ID:

F11298-7

Matrix:

AQ - Field Blank Water

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled:

10/23/01

Date Received: Percent Solids: n/a

10/24/01

**Analytical Batch** 

Run #1 Run #2 File ID ZF03434.D DF 1

By **SKW**  **Prep Date** 10/29/01

**Prep Batch** OP4075

**GZF161** 

Result

ND

RL

Units Q

CAS No. Compound

Analyzed

10/29/01

0.28

mg/l

CAS No.

Surrogate Recoveries

TPH (C8-C40)

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

93%

55-130%

como 6kg/cz

Client Sample ID: 011-04-PREEB-W-03-Q1

Lab Sample ID:

F11333-2

Matrix:

AQ - Field Blank Soil

DF

1

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

**Date Sampled:** 10/25/01

Date Received: 10/27/01

Percent Solids: n/a

Run #1

File ID OP18041.D Analyzed 11/03/01

**Prep Date** By 11/01/01 ME

**Prep Batch OP4108** 

**Analytical Batch** 

**GOP683** 

Run #2

CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

ND

0.28

mg/l 从

CAS No.

**Surrogate Recoveries** 

Run# 1

Run# 2

Limits

84-15-1

o-Terphenyl

80%

55-130%

omo 6/28/02

Client Sample ID: 011-04-MP-5N-S-66'-Q1

Lab Sample ID: Matrix: F11333-3

Method: Project: SO - Soil FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 10/25/01

Date Received: 10/27/01
Percent Solids: 89.9

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 OP18136.D 1 11/06/01 SKW 11/05/01 OP4123 GOP685

Run #2

CAS No. Compound

Result

RL

Units Q

TPH (C8-C40)

74.1

9.3 mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

88%

66-130%

como idela

Client Sample ID: 011-04-MP-10W-S-18-Q1

Lab Sample ID:

F11333-4

DF

1

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 10/25/01

Date Received: 10/27/01

Percent Solids: 87.7

**Analytical Batch Prep Batch Prep Date** 

**OP4123** 

Run #1 Run #2

CAS No.

Result

By

**SKW** 

11/05/01

**GOP685** 

Compound

OP18137.D

File ID

RL

Units Q

TPH (C8-C40)

Analyzed

11/06/01

10.5 9.5

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

87%

66-130%

Omo Chelos

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-43-Q1

Lab Sample ID:

F11333-5

Matrix:

Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 10/25/01

Date Received:

10/27/01

Percent Solids: 83.8

**Analytical Batch Prep Batch Prep Date Analyzed** By File ID DF **GOP685** SKW 11/05/01 11/06/01 Run #1 OP18138.D 1

Run #2

CAS No.

Result

OP4123

Compound

RL

Units Q

TPH (C8-C40)

28.6

9.9

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

83%

66-130%

ome 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-18-Q1

Lab Sample ID:

F11333-6

Matrix: Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 10/26/01

Date Received:

10/27/01

Percent Solids: 89.3

Prep Batch **Analytical Batch Prep Date** By DF **Analyzed** File ID **GOP685 SKW** 11/06/01 OP18139.D 1 Run #1

11/05/01

OP4123

Run #2

Compound

Result

RL

Units Q

CAS No.

TPH (C8-C40)

12.4

9.3

mg/kg

CAS No.

**Surrogate Recoveries** 

Run# 1

Run# 2

Limits

84-15-1

o-Terphenyl

88%

66-130%

como 6 ps/2-

Client Sample ID: 011-04-MP-20S-S-43-Q1

Lab Sample ID:

F11333-7

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 

10/26/01 10/27/01 Date Received:

Percent Solids: 93.4

**Analytical Batch Prep Batch Analyzed** By **Prep Date** File ID DF GOP685 SKW 11/05/01 **OP4123** 11/06/01 OP18140.D 1 Run #1

Run #2

Result

CAS No.

Compound

RL

Units Q

TPH (C8-C40)

ND

8.9

mg/kg U

CAS No.

**Surrogate Recoveries** 

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

66-130%

Cma 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-72-Q1

Lab Sample ID: Matrix:

F11333-8

Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 10/26/01

Date Received: 10/27/01

Percent Solids: 91.7

**Prep Batch Analytical Batch** File ID DF Analyzed By **Prep Date** Run #1 11/05/01 **GOP685** OP18160.D 1 11/07/01 SKW

Run #2

Compound

Result

OP4123

CAS No.

RL

Units Q

TPH (C8-C40)

22.2

9.0

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

88%

66-130%

0mm 6/28/cz

Client Sample ID: 011-04-MP-10W-S-72-Q1

Lab Sample ID:

F11333-9

Date Sampled:

10/26/01

Matrix:

SO - Soil

Date Received:

10/27/01

Method:

FLORIDA-PRO SW846 3550B

Percent Solids: 90.0

Project:

NAS Whiting Field CTO-0011

DF

1

Run #1

File ID OP18142.D

Analyzed 11/07/01

**Prep Date** 11/05/01

**Prep Batch** 

**Analytical Batch** 

Run #2

Result

RL

OP4123

**GOP685** 

CAS No.

Compound

By

SKW

Units Q

TPH (C8-C40)

12.7 9.2

mg/kg

CAS No.

Surrogate Recoveries

Run# 1

Run# 2

Limits

84-15-1

o-Terphenyl

84%

66-130%

cmo 6/28/02

Client Sample ID: 011-04-POSTEB-W-03-Q1

Lab Sample ID:

F11333-10

Matrix: Method:

Project:

AQ - Field Blank Soil

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

**Date Sampled:** 10/26/01

Date Received: 10/27/01

Percent Solids: n/a

File ID DF Analyzed By **Prep Date Prep Batch Analytical Batch** Run #1 OP18088.D 11/05/01 1 **SKW** 11/02/01

Run #2

Result

OP4115

**GOP685** 

CAS No. Compound

RL

Units Q

TPH (C8-C40)

ND 0.25

mg/l (人

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

95%

55-130%

cmo 6/28/12

Client Sample ID: 011-04-PREEB-W-01-Q2

Lab Sample ID:

F12178-1

Matrix:

AQ - Field Blank Soil

DF

1

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled:

01/30/02 Date Received: 01/31/02

Percent Solids: n/a

Run #1

File ID OP19680.D Analyzed 02/07/02

By **SKW**  **Prep Date** 02/06/02

Prep Batch OP4610

**Analytical Batch** 

Run #2

Compound

Result

RL

Units Q

**GOP732** 

CAS No.

TPH (C8-C40)

0.445

0.25

mg/l

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

91%

55-130%

Omo 6/28/02

Client Sample ID: 011-04-MP-10W-S-18'-Q2

Lab Sample ID:

F12178-2

Matrix: Method: SO - Soil

Project:

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 87.0

**Analytical Batch** Prep Batch **Prep Date** Analyzed Ву DF File ID **GOP728 OP4583** 02/01/02 SKW 02/01/02 OP19599.D Run #1

Run #2

CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

16.1 9.5 mg/kg U

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

97%

66-130%

muo 6/28/02

Client Sample ID: 011-04-MP-10W-S-43'-Q2

Lab Sample ID:

F12178-3

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02 Percent Solids: 91.1

**Analytical Batch** 

Run #1 Run #2 File ID OP19601.D

Analyzed DF 02/01/02 1

By **SKW**  Prep Date 02/01/02

Prep Batch OP4583

**GOP728** 

CAS No.

Compound

Result

RL

Units Q mg/kg U

TPH (C8-C40)

Run# 2

Limits

Surrogate Recoveries

Run#1

10.3 9.0

84-15-1

CAS No.

o-Terphenyl

101%

66-130%

Como col 28ler

Client Sample ID: 011-04-MP-10W-S-72'-Q2

Lab Sample ID:

F12178-4

Date Sampled: 01/30/02

Matrix:

SO - Soil

Date Received:

01/31/02

Method: Project:

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

DF

1

Percent Solids: 88.4

Run #1

CAS No.

File ID OP19602.D Analyzed 02/01/02

**Prep Date** 02/01/02

**Prep Batch** OP4583

**Analytical Batch** 

**GOP728** 

Run #2

Compound

TPH (C8-C40)

Result

RL

By

SKW

Units Q

14.9 9.6 mg/kg U

CAS No.

Surrogate Recoveries

Run#1

Limits Run#2

84-15-1

o-Terphenyl

100%

66-130%

00006/28/02

Client Sample ID: 011-04-MP-05N-S-18'-Q2

Lab Sample ID:

F12178-5

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 88.3

**Analytical Batch Prep Batch** Prep Date DF Analyzed Ву File ID **GOP728 SKW** 02/01/02 OP4583 OP19607.D 20 02/01/02 Run #1

Run #2

RLUnits Q Result CAS No. Compound

TPH (C8-C40)

936 190 mg/kg

Limits Surrogate Recoveries Run#1 Run#2 CAS No.

66-130% 90% 84-15-1 o-Terphenyl

cma 6/20/02

Client Sample ID: 011-04-MP-05N-S-38'-Q2

Lab Sample ID:

F12178-6

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 91.9

Run #1	File ID OP19603.D	<b>DF</b>	<b>Analyzed</b> 02/01/02	By SKW	Prep Date 02/01/02	Prep Batch OP4583	Analytical Batch GOP728
	0111111					_	

Run #2

TPH (C8-C40)

Result

RL

Units Q

Compound

67.3

9.3

mg/kg U

CAS No.

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

103%

66-130%

amo Carlor

Client Sample ID: 011-04-MP-05N-S-66'-Q2

Lab Sample ID:

F12178-7

Matrix:

Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 92.2

L							
	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run#1	OP19604.D	1	02/01/02	SKW	02/01/02	OP4583	GOP728

Run #2

Compound

Result

RL

mg/kg / U

CAS No.

Units Q

TPH (C8-C40)

**Run#1** 

**Run#2** 

Limits

84-15-1

CAS No.

o-Terphenyl

Surrogate Recoveries

101%

66-130%

Como 6/28/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID:	011-04-MP-30E-S-18'-Q2
-------------------	------------------------

Lab Sample ID: Matrix:

F12178-8

SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: Date Received:

01/30/02 01/31/02

Percent Solids: 89.8

Run #1	File ID OP19605.D	<b>DF</b>	Analyzed 02/01/02	By SKW	Prep Date 02/01/02	Prep Batch OP4583	Analytical Batch GOP728
70						Α	

Run #2

Method:

Project:

CAS No. Compound Result

RL

Units Q

8.7

mg/kg

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

TPH (C8-C40)

100%

66-130%

cmio 6/28/02

Client Sample ID: 011-04-MP-30E-S-43'-Q2

Lab Sample ID:

F12178-9

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

DF

1

Date Sampled: 01/30/02

Date Received: 01/31/02 Percent Solids: 89.0

Result

Analyzed

02/01/02

Вy

SKW

**Prep Date** 02/01/02

**Prep Batch** OP4583

**Analytical Batch** 

**GOP728** 

Run #1 Run #2

Compound CAS No.

OP19606.D

File ID

RL

Units Q mg/kg (

CAS No.

Surrogate Recoveries

Run# 1

23.8 9.3

Run#2

Limits

84-15-1

o-Terphenyl

TPH (C8-C40)

103%

66-130%

cmw 6/28/02

Page 1 of 1

Client Sample ID: 011-04-POSTEB-W-01-Q2

Lab Sample ID: Matrix:

F12178-10

AQ - Field Blank Soil

Method: Project:

FLORIDA-PRO SW846 3510C NAS Whiting Field CTO-0011

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: n/a

**Analytical Batch Prep Date Prep Batch** DF Analyzed By File ID 02/06/02 OP4610 **GOP732** 02/07/02 SKW 1 Run #1 OP19681.D

Run #2

CAS No. Compound Result

RL

Units Q

mg/l

CAS No.

Surrogate Recoveries

Run#1

ND 0.28

Run# 2

Limits

84-15-1

o-Terphenyl

TPH (C8-C40)

101%

55-130%

CMW 6/28/02

Client Sample ID: 011-04-PREEB-W-02-Q2

Lab Sample ID:

F12221-1

AQ - Field Blank Soil

DF

1

FLORIDA-PRO SW846 3510C NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: n/a

Method: Project:

Matrix:

**Prep Date** By 02/11/02 SKW

**Prep Batch** OP4625

**Analytical Batch GOP733** 

Run #1 Run #2

CAS No.

Compound

OP19710.D

File ID

Result

Analyzed

02/11/02

RL

Units Q

TPH (C8-C40)

ND 0.28

mg/l

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

55-130%

muo 6/28/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-30E-S-72'-Q2

Lab Sample ID:

F12221-2

Matrix: Method: SO - Soil FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

02/05/02 Date Received:

Percent Solids: 93.8

File ID OP19732.D Run #1

DF 1

Analyzed 02/12/02

Вy SKW Prep Date 02/11/02

Prep Batch **OP4628** 

**Analytical Batch GOP733** 

Run #2

CAS No.

Compound

Result

7.41 8.8

RL

Units Q

mg/kg J

TPH (C8-C40)

Run#1

Run#2

Limits

CAS No. 84-15-1

Surrogate Recoveries

o-Terphenyl

96%

66-130%

cmo 6/28/02

Client Sample ID: 011-04-BKGD-S-22'-Q2

Lab Sample ID:

1

Matrix:

F12221-3 SO - Soil

Method:

FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

Prep Batch **Prep Date** DF Analyzed By File ID 02/11/02 SKW 02/12/02

Run #1 Run #2

RL

OP4628

**Analytical Batch** 

**GOP733** 

CAS No.

Compound

TPH (C8-C40)

o-Terphenyl

OP19733.D

Result

Units Q

8.53

94%

mg/kg J ‱ 8.6

Limits

CAS No.

84-15-1

Surrogate Recoveries

Run#1

Run# 2

66-130%

cmo 6/28/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-43'-Q2

Lab Sample ID: Matrix:

F12221-4

1

Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.3

Prep Date DF Analyzed By File ID

02/11/02

**Prep Batch** OP4628

**Analytical Batch** 

**GOP733** 

Run #1 Run #2 CAS No.

Compound

TPH (C8-C40)

OP19734.D

Result

02/12/02

RL

SKW

Units Q

17,5 9.6

mg/kg

CAS No.

**Surrogate Recoveries** 

Run# 1

Limits Run# 2

84-15-1

o-Terphenyl

98%

66-130%

Cmno 6/28/02

**Analytical Batch** 

**GOP733** 

Client Sample ID: 011-04-BKGD-S-72'-Q2

Lab Sample ID:

F12221-5

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

1

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 93.4

**Prep Batch Prep Date** By Analyzed DF File ID **OP4628** SKW 02/11/02 02/12/02

Run #1 Run #2

CAS No.

Units Q RL Result Compound

TPH (C8-C40)

OP19741.D

mg/kg 14.3 8.8

Surrogate Recoveries CAS No.

Limits **Run#1** Run#2

o-Terphenyl 84-15-1

90%

66-130%

cme 6/28/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-20S-S-18'-Q2

Lab Sample ID:

F12221-6

Matrix:

Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02 Date Received: 02/05/02

Percent Solids: 85.7

**Analytical Batch** Prep Date Prep Batch By Analyzed DF File ID **GOP733** 02/11/02 **OP4628** SKW 1 02/12/02 OP19742.D Run #1

Run #2

CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

9.91 9.5

mg/kg

Surrogate Recoveries CAS No.

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

94%

66-130%

cmo 6/28/02

Client Sample ID: 011-04-MP-20S-S-43'-Q2

Lab Sample ID:

F12221-7

Matrix: Method: SO - Soil FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02 Date Received: 02/05/02

Percent Solids: 92.0

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run#	1 OP19743.D	1	02/12/02	SKW	02/11/02	OP4628	GOP733

Run #2

CAS No. Compound

Result

 $\mathbf{RL}$ 

Units Q

mg/kg J

CAS No. Surrogate Recoveries

Run# 1

8.09 9.0

Run# 2

Limits

84-15-1

o-Terphenyl

TPH (C8-C40)

91%

66-130%

omo 6/28/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-20S-S-72'-Q2

Lab Sample ID:

F12221-8

Matrix:

SO - Soil

Method:

FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

**Analytical Batch** Prep Batch Prep Date By Analyzed File ID DF **GOP733** 02/11/02 SKW 02/12/02 OP19744.D 1 Run#1

Run #2

Compound

Result

RL

**OP4628** 

CAS No.

Units Q

TPH (C8-C40)

**8.7** 

mg/kg (人

CAS No.

Surrogate Recoveries

Run# 1

**Run#2** 

Limits

84-15-1

o-Terphenyl

179% 4

66-130%

cmo6/28/02

<sup>(</sup>a) Suspected double surrogate; however, sample was BDL.

Client Sample ID: 011-04-MP-20S-S-100'-Q2

Lab Sample ID:

F12221-9

Matrix:

Method: Project:

SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

							4 1-421 Dotoh
1	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
Run #1	OP19745.D	1	02/12/02	SKW	02/11/02	OP4628	GOP733

Run #2

CAS No.

Compound

TPH (C8-C40)

Result

RL

Units Q

ND 9.0

mg/kg (人

CAS No. **Surrogate Recoveries**  Run#1

Run# 2

Limits

84-15-1 o-Terphenyl 94%

66-130%

CMMD 6/28/62

Client Sample ID: 011-04-POSTEB-W-02-Q2

Lab Sample ID:

F12221-10

Matrix:

AQ - Field Blank Soil

Method: Project: FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids:

**Analytical Batch Prep Batch** 

Run #1

File ID OP19711.D

Analyzed DF 02/11/02 1

By SKW **Prep Date** 02/11/02

OP4625

**GOP733** 

Run #2

CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

ND 0.28

mg/1 (

CAS No.

Surrogate Recoveries

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

92%

55-130%

0mmo 6/28/02

Client Sample ID: 011-04-PREEB-W-01-Q3

Lab Sample ID:

F13055-1

Matrix:

AQ - Field Blank Soil

Method:

FLORIDA-PRO SW846 3510C

Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: n/a

<u></u>										
	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch			
Run #1	OP20759.D	1	05/07/02	ME	05/06/02	OP5090	GOP771			

Run #2

Final Volume **Initial Volume** 

Run #1

1.0 ml

Run #2

RL Units Q Result Compound CAS No.

TPH (C8-C40)

U mg/l 0.25 ND

**Surrogate Recoveries** CAS No.

960 ml

Limits Run#1 Run#2

84-15-1 o-Terphenyl 93%

55-130%

0mmo 6/28/02

Client Sample ID: 011-04-BKGD-S-22'-Q3

Lab Sample ID:

F13055-2

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 89.6

**Analytical Batch Prep Date Prep Batch** Analyzed By DF File ID 05/06/02 OP5088 **GOP771** ME 05/08/02 Run #1 OP20779.D 1

Run #2

**Final Volume Initial Weight** 

Run #1

31.8 g

1.0 ml

Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

8.8

mg/kg

**Surrogate Recoveries** CAS No.

Run# 2 Run#1

Limits

84-15-1

o-Terphenyl

91%

66-130%

mu 6/28/02

Client Sample ID: 011-04-BKGD-S-43'-Q3

Lab Sample ID:

F13055-3

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 94.4

**Analytical Batch Prep Batch Prep Date** DF Analyzed By File ID **GOP771 OP5088** 05/08/02 ME 05/06/02 OP20780.D 1 Run #1

Run #2

**Final Volume** Initial Weight

29.2 g Run #1

1.0 ml

Run #2

Units Q RL Result Compound CAS No.

> ₿ 9.1 mg/kg TPH (C8-C40)

Limits Run#2 Run#1 **Surrogate Recoveries** CAS No.

66-130% 98% o-Terphenyl 84-15-1

cmm 6/28/02

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-BKGD-S-72'-Q3

Lab Sample ID:

F13055-4

SO - Soil FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/29/02 Date Received: 05/01/02

Percent Solids: 93.1

**Analytical Batch** Prep Date **Prep Batch** File ID DF **Analyzed** By **GOP771** OP20781.D 1 05/08/02 ME 05/06/02 **OP5088** Run #1

Run #2

Matrix:

Method:

Project:

**Final Volume** Initial Weight

Run #1

29.2 g 1.0 ml

Run #2

RL Units Q CAS No. Compound Result

TPH (C8-C40)

81.8 9.2 mg/kg

CAS No. **Surrogate Recoveries** 

Run#2 Limits Run#1

84-15-1 o-Terphenyl 96%

66-130%

como 6/28/02

Client Sample ID: 011-04-MP-30E-S-18'-Q3

Lab Sample ID:

F13055-5

Matrix: Method: SO - Soil FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 87.6

**Analytical Batch Prep Batch Prep Date** Analyzed By DF File ID GOP771 **OP5088** ME 05/06/02 05/08/02 1 OP20782.D Run #1

Run #2

**Initial Weight Final Volume** 

Run #1

1.0 ml

Run #2

Units Q RL Result CAS No. Compound

TPH (C8-C40)

9.7 mg/kg 25.4

**Surrogate Recoveries** CAS No.

29.5 g

Limits Run#2 Run#1

o-Terphenyl 84-15-1

96%

66-130%

mu 6/28/02

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13055-6

SO - Soil

Matrix: Method: Project:

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 93.9

**Analytical Batch Prep Batch Prep Date** By DF Analyzed File ID GOP771 05/06/02 **OP5088** ME 05/08/02 1 OP20783.D Run #1

Run #2

Final Volume **Initial Weight** 

29.4 g Run #1

1.0 ml

Run #2

Result RL Units Q Compound CAS No.

TPH (C8-C40)

9.1 mg/kg 10.4

Surrogate Recoveries CAS No.

**Run#2** Limits Run#1

84-15-1 o-Terphenyl

96%

66-130%

mw 6/28/02

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13055-7

Matrix:

AO - Field Blank Soil

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: n/a

**Analytical Batch Prep Batch** Analyzed Вy **Prep Date** DF File ID GOP771 05/06/02 OP5090 05/07/02 ME OP20760.D 1 Run #1

Run #2

**Initial Volume Final Volume** 

Run #1

1.0 ml

Run #2

CAS No. Compound

960 ml

Result

RL

Units Q

TPH (C8-C40)

0.25

mg/l

CAS No. **Surrogate Recoveries**  **Run#1** 

Run#2

Limits

84-15-1

o-Terphenyl

98%

55-130%

omi 6/28/02

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Page 1 of 1

Client Sample ID: 011-04-PREEB-W-02-Q3

Lab Sample ID:

F13055-8

Matrix:

AQ - Field Blank Soil

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: n/a

**Prep Date Prep Batch** 

Run #1 Run #2 File ID OP20761.D DF

Analyzed 05/07/02

By ME

05/06/02

OP5090

**Analytical Batch** 

GOP771

**Initial Volume Final Volume** 

Run #1 850 ml 1.0 ml

Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

**0.30** 

mg/l (人

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

94%

55-130%

mus 6/28/62

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13055-9

Matrix:

SO - Soil

Method:

FLORIDA-PRO SW846 3550B

**Date Sampled:** 04/30/02

Date Received: 05/01/02 Percent Solids: 93.7

NAS Whiting Field CTO-0011 Project:

File ID Run#1

OP20784.D

Analyzed 05/08/02

By ME **Prep Date** 05/06/02

**Prep Batch** OP5088

**Analytical Batch** 

GOP771

Run #2

**Initial Weight Final Volume** 

Run #1

1.0 ml

DF

1

Run #2

CAS No. Compound

30.8 g

Result

RL

Units Q

TPH (C8-C40)

mg/kg

CAS No.

**Surrogate Recoveries** 

**Run#1** 

Run# 2

Limits

84-15-1

o-Terphenyl

97%

66-130%

onne 6/28/02

ME

Page 1 of 1

Client Sample ID: 011-04-MP-FD1-S-100'-Q3

Lab Sample ID:

F13055-10

Matrix:

File ID

30.8 g

OP20785.D

SO - Soil

FLORIDA-PRO SW846 3550B

05/08/02

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

**OP5088** 

**GOP771** 

Percent Solids: 91.3

**Prep Date Prep Batch Analytical Batch** DF Analyzed By

05/06/02

Run #1 Run #2

Method: Project:

> **Final Volume Initial Weight**

Run #1

1.0 ml

Run #2

RL Units Q CAS No. Compound Result

TPH (C8-C40)

mg/kg

Limits CAS No. Surrogate Recoveries Run#1 Run#2

84-15-1 66-130% o-Terphenyl 91%

mie 6/02

Page 1 of 1

Client Sample ID: 011-04-MP-05N-S-18'-Q3

Lab Sample ID:

F13055-11

Matrix:

SO - Soil

FLORIDA-PRO SW846 3550B

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 87.6

Method: Project:

NAS Whiting Field CTO-0011

Run #1

File ID OP20786.D DF 1

Analyzed By 05/08/02 ME **Prep Date** 05/06/02

**Prep Batch** 

**Analytical Batch** 

OP5088 GOP771

Run #2

Initial Weight

**Final Volume** 

Run #1

1.0 ml 31.0 g

Run #2

CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

23.9

9.2

mg/kg

CAS No.

**Surrogate Recoveries** 

Run# 1

Run#2

Limits

84-15-1

o-Terphenyl

91%

66-130%

0m20 6/28/02

N = Indicates presumptive evidence of a compound

Client Sample ID: 011-04-MP-05N-S-38'-Q3

Lab Sample ID:

F13055-12

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02 Date Received: 05/01/02

Percent Solids: 90.4

File ID **Prep Date Prep Batch** DF Analyzed By Run#1 1

Run #2

OP20804.D

05/08/02

ME

05/06/02

**OP5088** 

**Analytical Batch** 

**GOP771** 

**Final Volume Initial Weight** 31.1 g

Run #1

1.0 ml

Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

19.5 8.9

mg/kg

CAS No. **Surrogate Recoveries**  Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

100%

66-130%

cum Glador

Page 1 of 1

Client Sample ID: 011-04-MP-05N-S-66'-Q3

Lab Sample ID:

F13055-13

Matrix: Method:

Project:

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 90.5

**Prep Date Prep Batch** By File ID DF Analyzed

05/08/02

Run #1

OP20791.D

ME

05/06/02

**OP5088** 

**Analytical Batch** 

**GOP771** 

Run #2

Initial Weight **Final Volume** 

Run #1

1.0 ml

1

Run #2

CAS No.

Compound

31.1 g

Result

RL

Units Q

TPH (C8-C40)

8.9

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

98%

66-130%

Omus 6/25/ce

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-18'-Q3

Lab Sample ID:

F13055-14

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 89.0

**Analytical Batch** Prep Date **Prep Batch** File ID DF Analyzed By Run#1

Project:

OP20792.D

05/08/02

ME

05/06/02

**OP5088** 

**GOP771** 

Run #2

**Initial Weight** 

**Final Volume** 1.0 ml

Run #1 Run #2

CAS No. Compound

30.6 g

Result

RL

Units Q

TPH (C8-C40)

14.6

9.2

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

89%

66-130%

00000 6/28/02

Client Sample ID: 011-04-MP-10W-S-43'-Q3

Lab Sample ID: Matrix:

F13055-15

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02 Percent Solids: 94.0

**Analytical Batch Prep Date Prep Batch** By File ID DF Analyzed **OP5088** Run#1

Run #2

Method:

Project:

OP20793.D

1

05/08/02

ME

05/06/02

GOP771

**Initial Weight** Final Volume

Run#1

1.0 ml

Run#2

CAS No. Compound

29.6 g

Result

RL

Units O

TPH (C8-C40)

7.67 9.0

mg/kg J

CAS No.

**Surrogate Recoveries** 

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

96%

66-130%

onio 668/02

Client Sample ID: 011-04-MP-10W-S-72'-Q3

Lab Sample ID:

F13055-16

Matrix:

SO - Soil

FLORIDA-PRO SW846 3550B

Method: Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 92.2

**Analytical Batch Prep Batch Prep Date** By File ID DF Analyzed GOP771 **OP5088** 05/06/02 ME OP20794.D 1 05/08/02 Run #1

Run #2

**Final Volume** Initial Weight

Run#1

1.0 ml

Run #2

Units Q RL Result CAS No. Compound

TPH (C8-C40)

8.7 29.5 mg/kg

**Surrogate Recoveries** CAS No.

31.2 g

Limits Run#1 Run# 2

84-15-1

o-Terphenyl

93%

66-130%

mus 6/28/cz

Client Sample ID: 011-04-MP-FD2-S-100'-Q3

Lab Sample ID:

F13055-17

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B

**Final Volume** 

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 89.3

Project:

NAS Whiting Field CTO-0011

File ID Run #1

OP20795.D

Analyzed 05/08/02

By ME **Prep Date** 05/06/02

**Prep Batch OP5088** 

**Analytical Batch** 

GOP771

Run #2

**Initial Weight** 

Run #1

1.0 ml

DF

1

30.5 g

Run #2 CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

18.4

9.2

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

98%

66-130%

Omo 6/20/02

Page 1 of 1

Client Sample ID: 011-04-PREEB-W-03-Q3

Lab Sample ID:

F13066-1

Matrix: Method:

Project:

AQ - Field Blank Water

DF

1

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: n/a

Prep Date Prep Batch

Run #1 Run #2 File ID OP20763.D Analyzed 05/07/02

By ME

05/06/02

**OP5090** 

**Analytical Batch** GOP771

Initial Volume **Final Volume** 

Run #1

1.0 ml

Run #2

CAS No. Compound

930 ml

Result

 $\mathbf{RL}$ 

Units Q

TPH (C8-C40)

0.28 ND

mg/l (

CAS No.

Surrogate Recoveries

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

99%

55-130%

0mp 6/28/02

Client Sample ID: 011-04-MP-20S-S-18'-Q3

Lab Sample ID:

F13066-2

Matrix:

SO - Soil

FLORIDA-PRO SW846 3550B

Method: Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: 87.8

**Analytical Batch Prep Date Prep Batch** File ID DF Analyzed By GOP771 Run #1 OP20796.D 1 05/08/02 ME 05/06/02 **OP5088** 

Run #2

Final Volume **Initial Weight** 

Run #1

1.0 ml

Run #2

CAS No. Compound

29.5 g

Result

RL

Units Q

9.32 9.7 mg/kg J

CAS No.

**Surrogate Recoveries** 

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

TPH (C8-C40)

93%

66-130%

0mmo 6/28/02

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13066-3

Matrix: Method:

Project:

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

Date Received: 05/02/02 Percent Solids: 91.1

**Prep Batch Prep Date** 

Run #1 Run #2 File ID

DF 1

Analyzed 05/08/02

By

**Analytical Batch** 

OP20797.D

**Final Volume** 

ME

05/06/02

**OP5088** 

**GOP771** 

**Initial Weight** 

29.6 g

 $1.0 \, \mathrm{ml}$ 

Run #1 Run #2

CAS No. Compound

Result

RL

Units Q

TPH (C8-C40)

ND 9.3

mg/kg 【人

CAS No.

**Surrogate Recoveries** 

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

94%

66-130%

0m106/28/ez

Page 1 of 1

**Analytical Batch** 

**GOP771** 

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13066-4

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

Date Received: 05/02/02

Percent Solids: 93.2

Analyzed By **Prep Date Prep Batch** File ID DF 05/06/02 **OP5088** 05/08/02 ME Run #1 OP20798.D 1

Run #2

**Final Volume Initial Weight** 

Run #1 30.8 g 1.0 ml

Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

10.3 8.7

mg/kg

Surrogate Recoveries CAS No.

Run# 1

Run#2

Limits

84-15-1

o-Terphenyl

96%

66-130%

anu 6/28/02

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13066-5

Matrix:

AO - Field Blank Water

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

05/02/02

Date Received: Percent Solids: n/a

Analyzed File ID DF

Run #1

OP20768.D

1

05/07/02

By ME **Prep Date** 05/06/02

**Prep Batch OP5090** 

**Analytical Batch** 

GOP771

Run #2

**Final Volume Initial Volume** 

910 ml Run #1

 $1.0 \, \mathrm{ml}$ 

Run #2

Compound CAS No.

Result

RL

Units Q

TPH (C8-C40)

0.28 ND

mg/l ()

CAS No.

Surrogate Recoveries

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

99%

55-130%

mw6/28/02

Wet Chemistry Analyses

Client Sample ID: 011-04-BKGD-S-22'-Q1

Lab Sample ID: F11289-2

Matrix:

SO - Soil

Date Sampled: 10/22/01

Date Received: 10/23/01 Percent Solids: 86.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Units DF Analyzed By Method **Analyte** 

1 10/30/01 EP EPA 160.3 M Solids, Percent CORP ENG 81 M 10/26/01 ANJ <1200 LA 1200 **Total Organic Carbon** mg/kg

mo 6/28/02

Client Sample ID: 011-04-BKGD-S-43'-Q1

Lab Sample ID: Matrix:

F11289-3

Date Sampled: 10/22/01

SO - Soil

Date Received: 10/23/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 94.7

**General Chemistry** 

Q RL Result Units DF Analyzed By Method **Analyte** 

10/30/01 EP 94.7 % 1 EPA 160.3 M Solids, Percent 10/26/01 ANJ CORP ENG 81 M **Total Organic Carbon** <1000 U 1000 mg/kg 1

mui dzeloz

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-18'-Q1

Lab Sample ID: F11289-4
Matrix: SO - Soil

Date Sampled: 10/22/01 Date Received: 10/23/01 Percent Solids: 90.5

Project: NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result	RL	Units	DF	<b>Analyzed By</b>	Method
Solids, Percent Total Organic Carbon	بك 90.5 <1100 لا		% mg/kg	1	10/30/01 EP 10/26/01 ANJ	EPA 160.3 M CORP ENG 81 M

Chino 6/28/02

Client Sample ID: 011-04-MP-30E-S-30'-Q1

Lab Sample ID: F11289-5

Matrix:

SO - Soil

Date Sampled: 10/22/01

Date Received: 10/23/01

Percent Solids: 90.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method DF Analyzed By Result () Units Analyte

EPA 160.3 M 1 10/30/01 EP Solids, Percent <1100 / 1100 10/26/01 ANJ CORP ENG 81 M mg/kg 1 Total Organic Carbon

Omno 6/28/02

## nalysis

Accutest Laboratories

Accutest Laboratories
Client Sample ID: 011-04-MP-30E-S-43'-Q1
Lab Sample ID: F11289-6
Constant Series Series Page 10/22/01
Date Received: 10/23/01

Percent Solids: 93.5

Project:

NAS Whiting Field CTO-0011

#### **General Chemistry**

Analyte	Result Q RL	Units	DF	Analyzed By	Method
Solids, Percent	93.5	%	1	10/30/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg		10/26/01 ANJ	CORP ENG 81 M

CMW 6/28/02

Client Sample ID: 011-04-MP-30E-S-72'-Q1

Lab Sample ID: F11298-3
Matrix: SO - Soil

Date Sampled: 10/23/01 Date Received: 10/24/01 Percent Solids: 92.2

Project:

NAS Whiting Field CTO-0011

#### **General Chemistry**

Analyte	Result Q RL	Units	DF	Analyzed By	Method
Solids, Percent	92.2	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 ( 1100	mg/kg	1	10/29/01 ANJ	CORP ENG 81 M

mis 6/28/02

Page 1 of 1

Client Sample ID: 011-04-BKGD-S-72'-Q1

Lab Sample ID: F11298-4 Matrix:

SO - Soil

**Date Sampled:** 10/23/01 Date Received: 10/24/01 Percent Solids: 92.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result 👱 RL	Units	DF	Analyzed By	Method
Solids, Percent	92.1	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 () 1100	mg/kg	1	10/29/01 ANJ	CORP ENG 81 M

Page 1 of 1

Client Sample ID: 011-04-MP-10N-S-18-Q1

Lab Sample ID: Matrix:

F11298-5

SO - Soil

**Date Sampled:** 10/23/01

Percent Solids: 87.2

Date Received: 10/24/01

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result 🖳 RL	Units	DF	Analyzed By	Method
Solids, Percent	87.2 <1100 \( \) 1100	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg	1	10/29/01 anj	CORP ENG 81 M

Page 1 of 1

Client Sample ID: 011-04-MP-10N-S-38-Q1

Lab Sample ID: F11298-6

Matrix: So

SO - Soil

**Date Sampled:** 10/23/01

Date Received: 10/24/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 90.2

#### **General Chemistry**

Analyte	Result 📿 RL	Units	DF	Analyzed By	Method
Solids, Percent	90.2	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 \ \ \ 1100	mg/kg	1	10/29/01 ANJ	CORP ENG 81 M

Cumo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-5N-S-66'-Q1

Lab Sample ID: F11333-3
Matrix: SO - Soil

**Date Sampled:** 10/25/01 **Date Received:** 10/27/01 **Percent Solids:** 89.9

**Project:** NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Analyzed By Method

Solids, Percent 89.9 % 1 11/01/01 EP EPA 160.3 M

Total Organic Carbon 1100 mg/kg 1 11/08/01 ANJ CORP ENG 81M/SW9060M

ma 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-18-Q1

Lab Sample ID: Matrix: F11333-4 SO - Soil **Date Sampled:** 10/25/01 **Date Received:** 10/27/01

**Date Received:** 10/27/01 **Percent Solids:** 87.7

Project:

NAS Whiting Field CTO-0011

General Chemistry

Units DF **Analyzed By** Method **Analyte** 11/01/01 EP EPA 160.3 M Solids, Percent 87.7 1 mg/kg 1 11/08/01 ANJ CORP ENG 81M/SW9060M **Total Organic Carbon** <1100

mus 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-43-Q1

Lab Sample ID: Matrix:

F11333-5

SO - Soil

**Date Sampled:** 10/25/01 Date Received: 10/27/01

Percent Solids: 83.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result Q RL Units DF Analyzed By Method Analyte

1 11/01/01 EP EPA 160.3 M Solids, Percent

<1200 11/08/01 ANJ CORP ENG 81M/SW9060M mg/kg 1 **Total Organic Carbon** 

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-18-Q1

Lab Sample ID: F11333-6
Matrix: SO - Soil

Date Sampled: 10/26/01 Date Received: 10/27/01 Percent Solids: 89.3

**Project:** NAS Whiting Field CTO-0011

**General Chemistry** 

Result RL Units DF Analyzed By **Analyte** Method Solids, Percent 1 11/01/01 EP EPA 160.3 M <1100 U **Total Organic Carbon** 1100 mg/kg 1 11/08/01 ANJ CORP ENG 81M/SW9060M

CMW6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-43-Q1

Lab Sample ID:

F11333-7 SO - Soil

Date Sampled: 10/26/01 Date Received: 10/27/01

Matrix: Project:

NAS Whiting Field CTO-0011

Percent Solids: 93.4

#### **General Chemistry**

Analyte	Result (X) RL	Units	DF	Analyzed By	Method
Solids, Percent	93.4	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 ( 1100	mg/kg		11/08/01 ANJ	CORP ENG 81M/SW9060M

Cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-72-Q1

Lab Sample ID: Matrix:

F11333-8

**Date Sampled:** 10/26/01

SO - Soil

Date Received: 10/27/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 91.7

#### **General Chemistry**

Analyte	Result Q RL	Units DF	Analyzed By	Method
Solids, Percent	91.7	% 1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg 1	11/08/01 ANJ	CORP ENG 81M/SW9060M

CMD 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-72-Q1

Lab Sample ID:

F11333-9

**Date Sampled:** 10/26/01

Matrix:

SO - Soil

Date Received: 10/27/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 90.0

#### **General Chemistry**

Analyte	Result 🖳 RL	Units DF	Analyzed By	Method
Solids, Percent	90	% 1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 以 1100	mg/kg 1	11/08/01 ANJ	CORP ENG 81M/SW9060M

como 6/25/02

Client Sample ID: 011-04-MP-10W-S-18'-Q2

Lab Sample ID: Matrix:

F12178-2

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 87.0

**General Chemistry** 

C) RL Method Units DF Analyzed By Analyte 02/01/02 YA EPA 160.3 M 1 Solids, Percent CORP ENG 81M/SW9060M 02/13/02 ANJ 1 mg/kg Total Organic Carbon

0,000 6/28/02

Client Sample ID: 011-04-MP-10W-S-43'-Q2

F12178-3 Lab Sample ID: Matrix:

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02 Percent Solids: 91.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result Q Analyzed By Method RLUnits DF Analyte 02/01/02 YA 1 EPA 160.3 M Solids, Percent

02/13/02 ANJ <1100 U mg/kg CORP ENG 81M/SW9060M **Total Organic Carbon** 

cmus 6/28/02

Client Sample ID: 011-04-MP-10W-S-72'-Q2

Lab Sample ID: Matrix:

F12178-4

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: 88.4

Project:

NAS Whiting Field CTO-0011

General Chemistry

Analyte	Result $\Theta$ RL	Units D	F Analyzed By	Method
Solids, Percent	88.4	% 1	02/01/02 YA	EPA 160.3 M
Total Organic Carbon	<1100 <b>(</b> ) 1100	mg/kg 1	02/13/02 ANJ	CORP ENG 81M/SW9060M

Como 6/28/cz

Client Sample ID: 011-04-MP-05N-S-18'-Q2

Lab Sample ID:

F12178-5

SO - Soil

Date Sampled: 01/30/02

Date Received: 01/31/02

Project:

Matrix:

NAS Whiting Field CTO-0011

Percent Solids: 88.3

**General Chemistry** 

Analyzed By Method Result (2) RL Units DF Analyte

02/01/02 YA EPA 160.3 M % 1 88.3 Solids, Percent

02/13/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 1100 Total Organic Carbon 1560

Client Sample ID: 011-04-MP-05N-S-38'-Q2

Lab Sample ID:

F12178-6

Matrix:

SO - Soil

Date Sampled: 01/30/02

Date Received: 01/31/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 91.9

#### **General Chemistry**

Analyte	Result () RL	Units	DF	Analyzed By	Method
Solids, Percent	91.9 <1100 <b>U</b> 1100	% mg/kg	1	02/01/02 YA 02/13/02 ANJ	EPA 160.3 M CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-05N-S-66'-Q2

Lab Sample ID:

F12178-7

Matrix:

SO - Soil

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 92.2

Project:

Analyte

NAS Whiting Field CTO-0011

**General Chemistry** 

Result 🔾

RL

DF

1

Analyzed By

Method

Solids, Percent

Total Organic Carbon

92.2

<1100 **U** 1100

mg/kg

Units

02/01/02 YA 02/13/02 ANJ

EPA 160.3 M CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-18'-Q2

Lab Sample ID:

F12178-8

Matrix:

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: 89.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyzed By Method Result QRLUnits DF Analyte

Solids, Percent Total Organic Carbon 89.8 <1100 U

mg/kg

1 1

02/01/02 YA EPA 160.3 M

02/13/02 ANJ CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-43'-Q2

Lab Sample ID: Matrix:

F12178-9

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: 89.0

Project:

NAS Whiting Field CTO-0011

General Chemistry

Analyte	Result $\widehat{Q}$ RL	Units	DF	Analyzed By	Method
Solids, Percent Total Organic Carbon	89	%	1	02/01/02 YA	EPA 160.3 M
	<1100 <b>U</b> 1100	mg/kg	1	02/13/02 ANJ	CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-72'-Q2

Lab Sample ID:

F12221-2

Matrix:

SO - Soil

**Date Sampled:** 02/04/02

Date Received: 02/05/02

Percent Solids: 93.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By Result (2) DF RLUnits Analyte

Solids, Percent

<1100 ( 1100 Total Organic Carbon

%

1 1 mg/kg

02/06/02 YA

EPA 160.3 M

02/14/02 ANJ CORP ENG 81M/SW9060M

como G/28/02

Client Sample ID: 011-04-BKGD-S-22'-Q2

Lab Sample ID: Matrix:

F12221-3

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By DF Result (2) RLUnits Analyte

02/06/02 YA EPA 160.3 M 1 % Solids, Percent

02/14/02 ANJ CORP ENG 81M/SW9060M 1 1100 mg/kg <1100 Total Organic Carbon

mmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-BKGD-S-43'-Q2

Lab Sample ID: Matrix:

F12221-4

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.3

Project:

NAS Whiting Field CTO-0011

General Chemistry

**Analyte** 

Result 🔾

RL

Units

DF

Analyzed By

Method

Solids, Percent Total Organic Carbon <1200

1200

mg/kg

1 1 02/06/02 YA 02/14/02 ANJ EPA 160.3 M CORP ENG 81M/SW9060M

cma 6/28/02

Client Sample ID: 011-04-BKGD-S-72'-Q2

Lab Sample ID: Matrix:

F12221-5

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02 Percent Solids: 93.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By DF Result Q RLUnits Analyte

EPA 160.3 M 02/06/02 YA 1 Solids, Percent

93.4 <1100 **()** 1100 02/14/02 ANJ CORP ENG 81M/SW9060M 1 mg/kg Total Organic Carbon

0mmo 6/28/02

Client Sample ID: 011-04-MP-20S-S-18'-Q2

Lab Sample ID:

F12221-6

Matrix:

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.7

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte

Result () RL

Units

%

DF

Analyzed By

EPA 160.3 M

Method

Solids, Percent Total Organic Carbon

<1200

1 1 mg/kg

02/06/02 YA 02/14/02 ANJ

CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-20S-S-43'-Q2

Lab Sample ID: Matrix:

F12221-7

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

Project:

Analyte

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By Units DF Result (2)  $\mathbf{RL}$ 

EPA 160.3 M 02/06/02 YA 1 % Solids, Percent

CORP ENG 81M/SW9060M 02/14/02 ANJ mg/kg -1 Total Organic Carbon

amo 6/28/02

Client Sample ID: 011-04-MP-20S-S-72'-Q2

Lab Sample ID: Matrix:

F12221-8 SO - Soil

Date Sampled: 02/04/02 Date Received: 02/05/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 94.4

General Chemistry

Method Analyzed By DF Units RLResult Analyte 02/06/02 YA EPA 160.3 M 1 94.4 Solids, Percent CORP ENG 81M/SW9060M 02/14/02 ANJ 1 mg/kg Total Organic Carbon

Client Sample ID: 011-04-MP-20S-S-100'-Q2

Lab Sample ID: Matrix:

F12221-9

SO - Soil

Date Sampled: 02/04/02 Date Received: 02/05/02

Percent Solids: 92.0

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result $\angle$ RL	Units	DF	Analyzed By	Method
Solids, Percent Total Organic Carbon	9 <b>2</b>	%	1	02/06/02 YA	EPA 160.3 M
	<1100 🚺 1100	mg/kg	1	02/14/02 ANJ	CORP ENG 81M/SW9060M

amo 6/28/02

Client Sample ID: 011-04-BKGD-S-22'-Q3

Lab Sample ID: Matrix: F13055-2

SO - Soil

Date Sampled: 04/29/02 Date Received: 05/01/02 Percent Solids: 89.6

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Result Units DF Analyzed By Method

Solids, Percent 89.6 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 \ 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

CMO 6/28/02

Client Sample ID: 011-04-BKGD-S-43'-Q3

F13055-3 Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 04/29/02 Date Received: 05/01/02

Percent Solids: 94.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result () RL Analyzed By Method Units DF Analyte

05/03/02 LL EPA 160.3 M % 1 94.4 Solids, Percent

1100 CORP ENG 81M/SW9060M 05/10/02 ANJ 1 mg/kg Total Organic Carbon <1100 ()

Client Sample ID: 011-04-BKGD-S-72'-Q3

Lab Sample ID: Matrix:

F13055-4

SO - Soil

**Date Sampled:** 04/29/02

Date Received: 05/01/02

Percent Solids: 93.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result (V Method Analyzed By Units DF RL **Analyte** 

05/03/02 LL EPA 160.3 M 1 Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M mg/kg Total Organic Carbon

Client Sample ID: 011-04-MP-30E-S-18'-Q3

Lab Sample ID:

F13055-5

Matrix:

SO - Soil

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 87.6

Project:

**Analyte** 

NAS Whiting Field CTO-0011

General Chemistry

Method RL Units DF Analyzed By

05/03/02 LL EPA 160.3 M % 1 Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M <1100 [ 1100 mg/kg **Total Organic Carbon** 

cma 6/28/02

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID: Matrix:

F13055-6

SO - Soil

**Date Sampled:** 04/29/02 Date Received: 05/01/02

Percent Solids: 93.9

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result & RL	Units DF	Analyzed By	Method
Solids, Percent	93.9	% 1	05/03/02 LL	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg 1	05/10/02 ANJ	CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID: F13055-9
Matrix: SO - Soil

Date Sampled: 04/30/02
Date Received: 05/01/02
Percent Solids: 93.7

Project: NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By DF  $\mathbf{RL}$ Units Result 🔾 Analyte 05/03/02 LL EPA 160.3 M % 1 Solids, Percent 05/10/02 ANJ CORP ENG 81M/SW9060M 1100 mg/kg 1 <1100 Total Organic Carbon

cmo6/20/ac

Client Sample ID: 011-04-MP-FD1-S-100'-Q3

Lab Sample ID: F13055-10
Matrix: SO - Soil

Date Sampled: 04/30/02 Date Received: 05/01/02 Percent Solids: 91.3

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Q RL Units DF Analyzed By Method

Solids, Percent 91.3 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 U 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-05N-S-18'-Q3

Lab Sample ID:

F13055-11

Matrix:

SO - Soil

Date Sampled: 04/30/02

Date Received: 05/01/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 87.6

**General Chemistry** 

Method **Analyzed By** DF Result RL Units Analyte

05/03/02 LL EPA 160.3 M Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 **Total Organic Carbon** 

mo color

Client Sample ID: 011-04-MP-05N-S-38'-Q3

Lab Sample ID:

F13055-12

Date Sampled: 04/30/02

SO - Soil

Date Received:

05/01/02

Percent Solids: 90.4

Project:

**Analyte** 

Matrix:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method DF Analyzed By Units

EPA 160.3 M 05/03/02 LL % 1 Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 Total Organic Carbon

CMD 6/28/02

Client Sample ID: 011-04-MP-05N-S-66'-Q3

Lab Sample ID: F13055-13

Matrix:

SO - Soil

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 90.5

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

**Analyzed By** Method Result RLUnits DF Analyte

% 1 05/03/02 LL EPA 160.3 M Solids, Percent

1 05/10/02 ANJ CORP ENG 81M/SW9060M 1100 mg/kg <1100 U Total Organic Carbon

cma 6/28/02

Client Sample ID: 011-04-MP-10W-S-18'-Q3

Lab Sample ID:

F13055-14

**Date Sampled:** 04/30/02

Matrix:

SO - Soil

Date Received: 05/01/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 89.0

## **General Chemistry**

Analyte	Result	Q)	RL	Units	DF	Analyzed By	Method
Analyte	Resuit	<u> </u>	RL.	Cinta	DI.	Analyzed Dj	IVACCIATO

1 05/03/02 LL EPA 160.3 M Solids, Percent

1 05/10/02 ANJ CORP ENG 81M/SW9060M <1100 U mg/kg Total Organic Carbon

cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-43'-Q3

Lab Sample ID: Matrix: F13055-15

SO - Soil

**Date Sampled:** 04/30/02 **Date Received:** 05/01/02

Percent Solids: 94.0

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Q RL Units DF Analyzed By Method

Solids, Percent 94 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 U 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

mmo 6/28/02

Client Sample ID: 011-04-MP-10W-S-72'-Q3

Lab Sample ID: Matrix:

F13055-16

SO - Soil

**Date Sampled:** 04/30/02 Date Received: 05/01/02

Percent Solids: 92.2

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By Result Q RL Units DF Analyte Solids, Percent % 1 05/03/02 LL EPA 160.3 M

<1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M Total Organic Carbon

0mo 6/28/62

Client Sample ID: 011-04-MP-FD2-S-100'-Q3

Lab Sample ID: Matrix:

F13055-17

SO - Soil

Date Sampled: 04/30/02

Date Received: 05/01/02 Percent Solids: 89.3

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte

Result

RL Units DF

Method Analyzed By

Solids, Percent Total Organic Carbon

89.3 <1100

1 mg/kg

05/03/02 LL 05/10/02 ANJ

EPA 160.3 M CORP ENG 81M/SW9060M

cmo 6/28/02

Client Sample ID: 011-04-MP-20S-S-18'-Q3

Lab Sample ID: Matrix:

F13066-2

SO - Soil

Date Sampled: 05/01/02

Date Received: 05/02/02

Percent Solids: 87.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Q RL Method DF Analyzed By Units Analyte Result

EPA 160.3 M 05/03/02 LL 87.8 % Solids, Percent

CORP ENG 81M/SW9060M 05/13/02 ANJ 1100 mg/kg 1 **Total Organic Carbon** <1100

cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13066-3

SO - Soil

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Project:

Analyte

Matrix:

NAS Whiting Field CTO-0011

Percent Solids: 91.1

**General Chemistry** 

Result ( RL Units DF Analyzed By Method

Solids, Percent 91.1 05/03/02 LL 1 **EPA 160.3 M** 

**Total Organic Carbon** <1100 1100 mg/kg 1 05/13/02 ANJ CORP ENG 81M/SW9060M

como colestas

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID: Matrix:

F13066-4

SO - Soil

**Date Sampled:** 05/01/02

Date Received: 05/02/02 Percent Solids: 93.2

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyzed By Method Units DF **Analyte** 05/03/02 LL 1 EPA 160.3 M Solids, Percent 05/13/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 **Total Organic Carbon** 

cmo 6/28/02

**Chain of Custody Forms** 

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į.	AND LABOR LAW STREET,	
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2007	The remain on appendix				1	(				G /X	- 1		-6		_	, COC NUMBER:	
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Field	151168	18	Leadest Laberal		ad Rd., Suite		Amy T	witty,	Amy Twitty, CH2M Hill, Inc.	ll, Inc.		40	766 Sea (ax) 850	1766 Sea Lark Lane, N (fax) 850-939-0035	avarre, F	1766 Ses Lark Lanc, Navarre, FL 32566 (phone) 850-939-8300, (fax) 850-939-0035	30-939- <del>8</del> 300,
SITETASK	CTO OR DO NUMBER:	3	LAD SO NUMBER:	ì		= 64	FAX AN	7.70 E	13 FAX AND TAKE, REPORTS/REDO TO:: RECIPIERT 2 Office and Company)	50 TO:		3	RECIPIEN	"RECIPIENT 2 (Address, Tel No., and Fex No.):	o., and Pax N	io.):	
	CTOMB	SUE O	8			-	Christ Inc.		rome, CE	Housome, CH2M Hill, Constructors,	nestruc		15 Perfi	115 Perimeter Center Place, NE, Suite 7. Phone=770-604-9182 Fax=770-604-9181	lace, NE,	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346	Ga. 30346
	PROJECT TRE, NO AND FAX NO:	3	LAR THE NO AND FAX NO.	K NO:		2 6	FAXA	D MAIL	PAX AND MAIL REPORTS/RDD TO:: RECIPIENT 3 (Name and Company)	. 20 JG:		<u> </u>	RECIPIEN	*RECIPIENT 3 (Address, Tel No., and Fax No.):	o and Fax N	ło.);	
	850-939-8300 ext. 17	Ī	67-62-6700				atlens	Roma	nov & Bo	nny Hogue,	CHIZ	H	15 Peri	neter Center ]	lace, NE,	Tatiana Romanov & Bonny Hogue, CH2M Hill 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346	Ga. 30346
						Ť	onstr	Constructors Inc.	DC.			*	hone	Phone=770-604-9182 Fax=770.604.9181	ex=770.6	04.9181	
						_		۲ <b>۷</b> ۾	ALYSES RE	MANAL YSES REQUIRED (Include Method Numbers)	e Method	Numbers)					
MPLB IDENTIFIER	B SAMPLE DESCRIPTIONLOCATION	Makes Advocated.	DATE <b>COL</b> LECTED	TIME COLLECTED	(see codes on 2OP)  DATA PKG LEVEL	(celendar days)	BLEX PÀ 2002/8051B	PAIL by 2010	TRPH by FL-PRO PAH-(1316),	TRPH(T-PRO), TOC(966)		-		<sup>26</sup> SANGLE TYPE (see codes on SOP)		<sup>27</sup> COMMENTS/ SCREENING READINGS	<sup>28</sup> LAB ID (for lab's use)
REEB-W-03-Q3	Pre Equipment Rinsate Blank	M	<b>107000</b>	00:6	۵	14	0		1					EB	Ont	Out of VOA HCls, 2 en. 1-liter	
-MP-208-S-18'-Q3	2 04-MP-20S @ 18 foot depth	70	<b>05</b> /01/02	9:10	ပ	7	3			1				Z	3ca. S	3ca. Syringe, 1 ca. 8-0z.	
AP-30E-S-43'-Q3	-MP-30E-S-43'-Q3P 04-MP-30E @ 43 foot depth	4	5 <b>85/</b> 01/02	9:40	C	12			1					z	3ea. S	3ea. Syringe, 1 ea. 8-oz.	
AP-30E-S-72'-Q3	-MP-30E-S-72'-Q3 04-MP-30E @ 72 foot depth	Ť	50/10/5	12:35	۵	14	6							Z	3ea. S	3ea. Syringe, 1 ea. 8-oz.	* 17.
1-POSTEB-W-01-15	Post Equipment Rinsate Blank	À	<b>60</b> 01/02	13:00	သ	14	3		1					EB	3eg. 4	3ez. 40ml VOAs, 2 ez. 1- liter	·
-TRIPB-W-01-Q3	V Trip Blank	R	401/02	XXXXX	ပ	14	7							ET.	26	2es. 40ml VOAs	
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ID COMPANY: (please place)	* COURIER AND SHIPPING NUMBER:		M SAMPLES TEMPERATURE AND C	" SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for labs use):	
en, CH2M Hill Comstructors, Inc.	Fed-Ex Airbill'No. 82853	502484503			
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Distribution: [   Origin	Distribution: [   Original - Laboratory (To be returned with Analytical Re	coort), f 1 Copy	alytical Report); [ 1 Copy 1 - Project File; [ 1 Chart 2 - PM/)	Brown MOINNI B NEWN	s

CH2MHILL Constructors, Inc.	Alberta, GA MGAG-1278 Thi Noc (TTD) BOL-1162 Fatt Noc (TTD) 004-2023			CHA	Z	Ģ	Ç	SO	HAIN-OF-CUSTODY RECORD	Y RE	$\mathcal{Z}$	)RD			. COC NUMBER.	30-02
NAMES	* РВОЛЕСТ НОМВВЯ	Na.	LAB NAME AND CONTACT:	TACT:		= 0	PAX AN	MAIL RE	1 PAX AND MAIL REPORTS/BDD TO:: RECIPIENT 1 (Name and Contrains)	ö		"RECD	ENT I	"RECIPIENT I (Address, Tol No., and Fax No.)	od Fax No.):	
biting Fleid	151168	Accut C-15	Accutest Labs, 4405 Vineland Rd., Suite C-15, Orlando, FL 32571	32571	Rd., St	1	) L	vitty, C	Amy Twitty, CH2M Hill, Inc.	nc.		1766 (fax)	1766 Sen Lark Lan (fax) 850-939-0035	rk Lane, Nava 9-0035	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 856-939-0035	-939-8300,
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	CTO-0011	PO 2379	67.9			0 3	Christel Inc.	le News	Christelle Newsome, CH2M Hill, Constructors, Inc.	[ Hill, Cons	ructor	1	erimet =770	115 Perimeter Center Place, NE, Sulte 7 Phone=770-604-9182 Fax=770.604.9181	115 Perimeter Center Place, NE, Sulte 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	Gą. 30346
	PROJECT TEL NO AND PAX NO:	<b>1 1 1 1 1 1 1 1 1 1</b>	LAB TEL NO AND FAX NO:	X NO:		2 2	AXAN	D MAIL R	PAX AND MAIL REPORTS/EDD TO:	ö		"RECI	ENT 3	RECIPIENT 3 (Address, Tel No., and Fax No.):	od Pax No.);	
Alth	850-939-8400 ext. 17	4074	407-425-6700			1 0	utlana	Tatiana Romanov Constructors Inc.	Tutians Romanov & Bonny Hogue, CH2M Hill Constructors Inc.	Hogue, Cl	ISM H		erimet 170	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9181	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	Ga. 30346
						H		ANA S	28 ANAL YSES REQUIRED (Include Method Numbers)	RED (Include M	ethod Nu	ibers)				
" sakipus idelymenin	<sup>B</sup> SAMPLE DESCRIPTION/LOCATION	YNKTRIX (908 on sabos ses)	upATE COLLECTED	COLLECTED  COLLECTED	TATA PKG LEVEL (see codes on SOP)	(cejenqei qela) <sub>SV</sub> LVL	BLEX P-20328031B	OR4-13 vd H9AT	PAH-(8319), TRPH(FL-PRO), TOC(9669)					* SAMPLE TYPE (see codes on SOP)	⊅ comments/ screening readings	.* LAB ID (for lab's use)
11-04-MP-05N-S-18'-Q3	04-MP-05N @ 18 levt depth	20	04/30/02	10:40	۲	7	20		1					N	3cs. Syringe, 1 es. 8-oz.	
11-04-MP-05N-S-18'-Q3 MS	11-14-MP-05N-8-18'-Q3 04-MP-05N @ 18 foot depth - MS	20	04/30/02	10:40	υ	2	6		-					MS	3es. Syrings, 1 en. 8-oz.	
11-04-MR-05N-5-18'-Q3 MSD	04-MP-08N @ 18 foot depth -	20	04/30/02	10:40	υ	7			-					СВ	3es. Syrings, 1 es. 8-0z.	
11-04-MP-05N-S-38'-Q3	04-MP-05N @ 38 foot depth	<b>2</b> 2	04/30/02	11:20	၁	<u> </u>	ε.		1					ĸ	3es. Syringe, 1 ea. 8-0z.	
11-04-MP-05N-S-66'-Q3	11.04.MP-05N.S.46'-Q3 04.MP-05N @ 66 foot depth	S	04/30/02	12:20	ບ	41	to		1					N	3ca. Syringe, 1 ea. 8-02.	
011-04-MP-10W-\$-18'- Q3	04-MP-10W @ 18 foot depth	20	04/30/02	14:20	ນ	3	100		11					Z	3ea. Syringe, 1 ea. 8-02.	
011-04-MP-10W-5-43'- Q3	04-MP-10W @ 43 foot depth	ν.	04/30/02	14:50	ນ	7	60		7					N	3ea. Syringe, 1 en. 8-02	
011-04-MP-10W-\$-72'- Q3	04-MP-10W @ 72 fout depth	Ø	04/30/02	15:50	ບ	77	3		77					N	3cs. Syringe, 1 es. 8-0z.	
011-04-MP-PD2-S-100". Q3	04-NY-FD2 @ 100 foot depth	22	04/30/02	XXXX	υ	7	т.		1					EDS	3ea. Syringe, 1 en. 8-02.	
011-04-POSTEB-W-01- Q3	Post Equipment Rinsate Blank	<b>≱</b>	04/30/02	17:35	၁	14	ń	1 1						EB	3ea, 40ml VOAs, 2 ea. 1- liter	
IR(S) AND COMPANY: (please min) (CEliveen, CH2M Hill Constructors, Inc.	ing instructors, Inc.	ndo.	COURIER AND SHIPPING NI		R535494214	1214					*	AMPLES TO	MPERA	TURE AND COND	* SAMPLES TEMPERATURE AND CONDITION UPON RECEIFT (for lab's uso)	;;
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	Diatibution:     Original - Laboratory (To be returned with	1-1-1	ratory (To ba retu	med with Analyti	al Report	10 [:	y 1 - Pro	ect File; {	   Asialytical Report); [	Ω					Fami CC1001, Rev 06/00	9009

475	151168-020430-01	"RECIPIENT 1 (Address, Tel No. , and Pax No.):	1766 See Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	* RECIPIENT 2 (Address, Tel No. , and Fax No.);	113 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Pbone=770-604-9182 Fax=770.604.9181	" RECIPIENT 3 (Address, Tel No., and Pax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga, 30346 Phone#770-604-9182 Fax=770.604.9181	
I ducount vacants to	CHAIN-OF-CUSIODY RECORD 151168-020430-01	II PAX AND MALL REPORTS/EDD TO:: RECIPIENT 1 (Name and Combany)	Inc	<sup>13</sup> PAX AND MALL REPORTINGDO TO:: RECIPIENT 2 (Neise and Company)	M Hill, Constructors,	19 FAX AND MAIL REPORTERED TO:: RECIPIENT 3 (Name and Company)	Tatians Romanov & Bonny Hogue, CH2M Hill 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Constructors Inc.	24 ANAL YSES RECUIRED (Include Method Numbers)
C 144 1 147	CHAIN-O	*LAB NAME AND CONTACT:	Accutest Labs, 4405 Vineland Rd., Suite C-15, Orlando, FL 32571	LAB PO NUMBER:	PO 2379	<sup>2</sup> LAB TEL NO AND FAX NO:	407-425-6700	
Atlanta, GA 30346-1278	The Abs: (770) 604-6182 Fee Abs: (770) 604-6282	PROJECT NUMBER:	151168	CTO OR DO NUMBER.	CTO-0011	PROJECT TEL NO AND FAX NO:	850-939-8360 ext. 17	
	Sobstitution of the	NAME:	liting Field	PHASE/SITE/TASK:			itty	

*LAB ID	(for labra use)										
st COMMAND	SD2	3ea, 40ml VOAs, 2 ca. 1- liter	3ea. Syringa, 1 cs. 8-oz.	Зея. Syringe, 1 ea. 8-oz.	3ea, Syringe, 1 ea. 8-02.	3ea. Syringe, 1 ea. 8-oz.	3ea. Syringe, 1 ea. 8-oz.	3ea. 40ml VOAs, 2 ea. 1- liter	3ea. 40ml VOAs, 2 ea. 1- liter	3ea. Syringe, 1 ea. 8-0z.	3ea. Syringe, 1 ca. 8-oz.
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3OP)	ETAM <sup>es</sup> Eraben sæ)	≩	တ	ος:	, S	20	9/2	≩	*	92	203
	* SAMPLE DESCRUPTION/LOCATION	11-04-PREEB-W-01-Q3 Pre Equipment Rinsate Blank	Background Location @ 22 foot depth	Background Location @ 43 foot depth	Background Location @ 72 foot depth	04-MP-3	04-MP-30E @ 43 foot depth	Post Equipment Rinsste Blank	1104-PRREB-W-02-Q3 Pro Equipment Rinsnte Blank	111-04 MP-30E-8-72'-Q3 04-MP-30E @ 72 foot depth	04-MP-FD1 @ 100 foot depth
	<sup>18</sup> Sample identifier	11-04-PREEB-W-01-Q3	311-64-BKGD-8-22'-Q3	011-04-BKGD-8-43'-Q3	011-64-BKGD-S-72'-Q3	11-04-MP-30E-S-18'-Q3	11-04-MP-30E-8-43'-Q3	011-04-POSTEB-W-01- O3	111-04-PREEB-W-02-Q3	111-04-MP-30E-8-72'-Q3	011-04-MP-FD1-S-100'- Q3

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une and Signature:			Printed Name and Signetare:			
Distribution: [   Origin	Distribution: [   Original - Laboratory (To be returned with Analyti	oul Report); [ ] C	lytical Report); [   Copy 1 - Project File; [   Copy 2 - PMO		Form CC1001, Ray 06/00	00/90

	CH2MHILL.	Abenta, CA 30346-1278 TRINC: (TT) 606-0192 As see, 5741			CHAD	Ż	Ō	١	2	4-OF-COSTODI NECON	<b>4</b>	五 う	5	}		-	151168-	151168-020430-03
14 Octation   15 Octation	VANG:	PROJECT NUMBER	- IVBX	AMB AND CON	TACT		F	AX AND	XXII.	EPORTS/RDD TO:			3	RECUEIS	II l (Address,	Tel No., enk	d Fux No.):	
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The control of the	PHASE/STIE/TASK:	CTO OR DO NUMBER	LABR	) NÜMBER:			12 5	AX AND	MALK	EPORTS/EDD TO			1	RECEPTED	II 2 (Address,	Tel No. , em	d Pac No.):	
The part of the		CTO-0011	PO 23	19			10 H	diete.	Nows	othe, CH2M I	10°	nstruci		15 Perti 182 Fas	meter Cent r=770.604.9	or Place, 181	, NE, Suite 700, Atlanta,	Gr. 30346 Phone=770-60
1		PROTECT THE NO AND FAX NO.	3	BE NO AND FA	XNO		12.5	TAX AND	XAE K	BRORTS/EDD TO			-	XBCPE	YT 3 (Address,	Tel No., m	d Pax No.);	
# MALTON Death Association	irty	850-939-8300 ext. 17	\$67.45	15-6700			# D	atiana	form In	or & Bouny I	logue,	CH2M	CHIII 1	15 Peri 182 Fe	mater Cent r=770,604.	ter Piace, 9181	, NE, Suite 700, Atlanta,	, Ga. 30346 Phone=770-60
The Blant Contains of State of		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					T		₹ ?	LYSES REQUIRE	D Chelud	e Mathod	Numbers)					
Trip Blank W 64/30/2002 33335 C 14 2	14 SAMPLE IDENTIFIER.	* \$AMPLE DESCRIPTION LOCATION	XISTIAN						Udd 14 m H481	PAHeting, TRPH(FL-PRO), TOCOSSON					# SAAP	LE TYPE	<sup>17</sup> COMMENTS/ SCREENING READINGS	(en lebs and)
15   15   15   15   15   15   15   15	111-04-TRIPB-W-01-Q3	-	≱	04/30/02	23333	υ	3	7	-							m	Zen. 40ml VOAs	
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' COC NUMBER	151168-011025-02	und Fax No.):	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-93938300, (fax) 850-939-0035	and Fax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 20346 Phone-770-604-9182 Fax-770-604.9282	and Fax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9282		<sup>J7</sup> COMMENTS/ SCREENING READINGS	3ea. Encore & 2 ea. 8- 0z.	3ea. Encore & 2 ea. 8- 0z.	3ea. Encore & 2 ea. 8- 0z.	3ea. Encore & 2 ea. 8- 0z.	3ea. 40ml VOAs, 3 ea. 1 liter.,				<sup>31</sup> SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's lise)	DATE			10/53/01	
• •		" RECIPIENT 1 (Address, Tel No., and Fax No.):	ark Lane, Nava 39-0035	<sup>5</sup> RECIPIENT 2 (Address, Tel No. , and Fax No.):	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9282	* RECIPIENT 3 (Address, Tel No., and Fax No.).	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9282		28 SAMPLE TYPE (see codes on SOP)	z	Z	Z	z	ОС				RATURE AND CONT					
	JKU	, " RECIPIENT		15 RECIPIENT	115 Perim Phone=77	" RECIPIENT	115 Perim Phone=77	bens)										MPLES TEMPE					
	HAIN-OF-CUSIODY RECORD	11 FAX AND MAIL CD of COC, Receipt Report, Preliminary data, & EDD TO::			11,		Tatiana Romanov, CH2M Hill Constructors Inc.	25 ANALYSES REQUIRED (Include Method Numbers)	& TOC by 9068									18 T	RECEIVED BY		¥		
	)DX	C, Receipt Rep	Amy Twitty, CH2M Hill, Inc.	<sup>12</sup> FAX AND MAIL Preliminary Report TO:: PROPIEMT 2 (Name and Company)	Christelle Newsome, CH2M Hill, Constructors, Inc.	FAX AND MAIL REPORTS/BDD TO:	H2M Hill	REQUIRED (I	PAHS by 8316, TRPH by FL-PRO,	7	7	2	2									(F)	
		OD of CO	CH2M	Prelimina and Cor	some, Inc.	REPORT	10v, C	ALYSES	TRPH By FL-PRO,			<u> </u>		-						Signature	Signal Co	Signature	
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	CHA	TACT	Accutest Laboratory, 4405 Vineland RD, C-15, Orlando, Fl. 32811			X NO:			TIME COLLECTED	1105		1 00	850	1415				PPING NUMBER.		11)	1019		
		LAB NAME AND CONTACT:	Accutest Laboratory, 440 C-15, Orlando, Fl. 32811	LAB PO NUMBER:	92	" LAB TEL NO AND FAX NO:	407-425-6700		n DATE	10/26/01	10/26/01	10/26/01	10/26/01	10/26/01				"COURIER AND SHIPPING Fed-Ex Airbill No.	DATE		2/0/		
		LABN	Accute C-15, (	LABPO	PO 2379	LABT	407-42		XINTAM <sup>ec</sup> (9O2 an exbon exe)	S	S	S	S	3				Fed-I	1	$\coprod$	$\square$		
115 Perimeter Center Place, Suite 700	Tel No: (770) 604-9182 Fax No: (770) 604-9282	Ī	151168	*CTO OR DO NUMBER:	CTO-0011	PROJECT TEL NO AND FAX NO:	850-939-8300 ext. 17		* SAMPLE DESCRIPTION/LOCATION	04-MP-20S @18 foot depth	04-MP-20S @43 foot depth	04-MP-20S @72 foot depth	04-MP-10W @72 foot depth	POST Equipment Rinsate Rlank				rint)	IGUEN BV	M M	Myn 100		
	H2MHILL Constructors line	~_	g Field	SE/SITE/TASK: "C	0	tract:			SAMPLE IDENTIFIER	04-MP-20S-S-18-Q1	04-MP-20S-S-43-Q1	04-MP-20S-S-72-Q1	34-MP-10W-S-72-Q1		; >			i) AND COMPANY: (please print) y, CH2M Hill, Inc.	W PRI INDITISHED BY	nd Signature:	in Kitchely		

	115 Perimeter Center Place, Suite 700 Attente CA 30344,1278					(		}			7.7		1			COC NUMBER	ند
Constructors, Inc.				CHA		Ş	ب <u>خ</u>	$\tilde{\Xi}$			IAIN-OF-CUSTODY KECOKD	0	K			151168-011025-01	25-01
,;;i	PROJEC	3	LAB NAME AND CONTACT:	TACT:		-	FAXAN	D WALL	CDof	OC, Rec	"I FAX AND MAIL CD of COC, Receipt Report, Preliminary data, PRDD TO:	ninary data,		PIENT I	18 RECIPIENT ! (Address, Tel No. , and Fax No.)	and Fax No.):	
Field	151168	Accu C-15,	Accutest Laboratory, 440 C-15, Orlando, Fl. 32811	ory, 4405 Vi.	5 Vineland RD,		Amy Twitty, CH2M Hill, Inc.	witty,	CH2	A HIII,	Inc.			Sea Ls 850-93	1766 Sea Lark Lane, Nav (fax) 850-939-0035	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	150-939-8300,
E/SITE/TASK:	CTO OR DO NUMBER:	3	LAB PO NUMBER:			= ~	FAXAN	D MAIL	L Prelimit me and C	ompany)	13 FAX AND MAIL Preliminary Report TO:: RECIPIENT 2 (Name and Company)		15 RECI	PIENT 2	SECIPIENT 2 (Address, Tel No., and Fax No.):	and Fax No.):	
	CTO-0011	PO 2379	379				Christelle Newson Constructors, Inc.	lle Ner	wsome , Inc.	, СН2	M Hill,		115 P Phone	erimet <del></del> 770-	er Center Place 604-9182 Fax	115 Perimeter Center Place, NE, Sulte 700, Atlanta, Ga. 30346 Phone-770-604-9182 Fax=770.604.9282	1, Ga. <b>GG</b> 346
ACT:	PROJECT TEL NO AND FAX NO:		"LAB TEL NO AND FAX NO:	XX NO:		<u> </u>	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	ID MAIL	L REPOR	(TS/EDD	. TO::		" RECI	PIENT 3	RECIPIENT 3 (Address, Tel No., and Fax No.)	and Fax No.):	)(
	850-939-8300 ext. 17	407-7	407-425-6700				Tatiana Inc.	Кош	anov,	CH2M	Tatiana Romanov, CH2M Hill Constructors Inc.	uctors	115 P Phon	erime	er Center Pla 604-9182 Fax	115 Perimeter Center Place, NE, Sulte 700, Atlanta, Ga. 10346 Phone=770-604-9182 Fax=770.604,9282	
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, AMPLE IDENTIFIER	** SAMPLE DESCRIPTION/LOCATION	XUITAM <sup>ec</sup> (402 no exbon 502)	n DATE	TIME COLLECTED	(see coqes on 2Ob) a DVIV bKG FEAEF	(calendar days)	81208/SE0S v4 X3T8	9 KH by 8310	,084-J7 & H4AT	.TOC p3 8000	PAHs by 8310, TRPH by FL-PRO, & TOC by 9060				26 SAMPLE TYPE (see codes on SOP)	" COMMENTS/ SCREENING READINGS	<sup>28</sup> LAB ID (for lab's use)
t-TRIPB-W-03-Q1	Trip Blank	≱	10/25/01	14:25	ပ	41	и		<u> </u>						၁၀	2ea. 40mi VOAs	
-PREEB-W-03-Q1	Pre Equipment Rinsate Blank	≱	10/22/01	14:40	U	7	3	7	-	_					υĎ	3ea. 40ml VOAs, 3 ea. 1-	
4-MP-5N-S-66'-Q1	04-MP-5N @ 66 foot depth	Ø	10/25/01	17:20	ပ	4	6	-			2				Z	3ea. Encore & 2 ea. 8- 0z.	
-:MP-10W-S-18-Q1	04-MP-10W @18 foot depth	S	10/22/01	17:50	ပ	4	ы				7				Z	3ea. Encore & 2 ea. 8- 0z.	
I-MP-10W-S-43-Q1	04-MP-10W @43 foot depth	S	10/22/01	18:30	υ	4	Е				7				Z	3ea. Encore & 2 ea. 8- 0z.	•
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ND COMPANY: (please print) r, CH2M Hill Constructors, Inc.	orint) tructors, Inc.	<u> </u>	"COURIER AND SHIPPING NUMBER. Fed-Ex Airbill No.	PING NUMBER								N SAN	PLES TE	EMPER/	TURE AND CON	<sup>JI</sup> SAMPL <u>QS TEMPERATURE AND CONDITION UPON RECEIPT (for laby use)</u>	:(əsn
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Message Signature	Stort Hender	7	251-0	į	port		Printed Name and Si	000	Signature	1	18 M	1	B	74		10/92/01	1500
Bitch &	Jun Carlo		92-01	-07	100	0	الملما	ED.	SEX.								
Signature							$A \neq$	10	X	H	0					19/2/01	C020)
	Decolution 1. Orbitist Laboritism (To be returned with Anabatical Report)     Cupy	4: -	more (To be retur	ned with Analytic	al Repur	=	1-	micer	]= = =	- Z	PMO				Č	form CC1001, Rev 06/00	18/00

	113 retainetet Jener riaca, Suite 100 Allanta, GA 30346-1278			VII V	1	7	7	101	Y	THE COUNTY OF THE PARTY OF THE	7		E			COC NUMBER:	
Constructors, Inc.	Tel No: (770) 604-9182 Fax No: (770) 604-9282			CHAI		5	١	2	7	J X	7	こして	3			151168-020130-01	30-01
T NAME:		LAB NAME	AND CONT	170CT:	Gnelon	4Polke	CIPIENT	MAJL R	EPORTS and Com	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT I (Name and Company)			" RECIPIE	RECIPIENT I (Address, Tel No., and Fax No.)	No. , and Fa	1x No.);	
	151168	Accutest	Caborato	Accutest Laboratory, 2355 Rough 130, Amy Twitty, CH2M Hill, PhDG B. Dayton No. 08510, 3.58	328 11	),	ту Тw	itty, C	H2M I	Amy Twitty, CH2M Hill, Inc.	!		1766 Se (fax) 85	1766 Sea Lark Lane, N (fax) 850-939-0035	davarre,	1766 Sen Lark Lanc, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	50-939-8300,
T PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NE	MBER:			<del></del>	17 FAX AND MAIL REPORTS/EDE RECIPIENT 2 (Name and Company)	MAIL R	EPORTS and Com	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)			" RECIPI	RECIPIENT 2 (Address, Tel No., and Fax No.):	No., and Fa	ax No.):	S ()
	CTO-0011	PO 2379				00	Christelle Newson Constructors, Inc.	e News tors, It	tome, C	Christelle Newsome, CH2M Hill, Constructors, Inc.	ii.		115 Per Phone=	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9181	Place, N Fax=770.	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346. Phone=770-604-9182 Fax=770.604.9181	, Ga. 30346
T CONTACT:	PROJECT TEL NO AND FAX NO:	" LAB TEL NO AND FAX NO:	NO AND FA	X NO:		13 A	13 FAX AND MAIL REPORTS/EDD RECIPIENT 3 (Name and Company)	MAIL R	EPORTS and Com	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)			" RECIPI	* RECIPIENT 3 (Address, Tel No., and Fax No.):	No. , and Fi	ы No.):	U
witty	850-939-8300 ext. 17	732-329-0200	200			FE	Tatiana Romanova & Hill Constructors Inc.	Roman	ova &	Tatiana Romanova & Bonnie Hogue, Hill Constructors Inc.	Hogue,	СН2М	115 Per	115 Perimeter Center Place, NE, Suite 7 Plone=770-604-9182 Fax=770.604.9181	Place, N Fax=770.	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	ı, Ga. 30346
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" SAMPLE IDENTIFIER	"SAMPLE DESCRIPTION/LOCATION	XMTTM <sup>45</sup> (402 an 590)	TAG " COLLECTED	" TIME COLLECTED	DATA PKG LEVEL	(colondar days)	81208/2605 vd X3T8	OR4-J4 vd H9AT	TOC by 9060					<sup>26</sup> SAMPLE TYPE (sec codes on SOP)		" COMMENTS/ SCREENING READINGS	<sup>24</sup> LAB ID (for lab's use)
011-04-PREEB-W-01-Q2	Pre Equipment Rinsate Blank	≱.	01/30/02	1030		4	3 2	7						ებ ,	Зса.	3ca. 40ml VOAs, 2 ca. 1- liter	
011-04-MP-10W-S-18"- Q2	04-MP-10W @ 18 foot depth	S 01	01/30/02	=5	υ	4	3	-	-					'z	Зеа.	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	
011-04-MP-10W-S-43'- Q2	04-MP-10W @ 43 foot depth	S 01	01/30/02	041	U	4	3	_	-					Z,	3ca.	3ea. Encore, 1 ea. 8-02., 1 en. 4-02	
011-04-MP-10W-S-72'- Q2	04-MP-10W @ 72 foot depth	S 01	01/30/02	004	υ	4	3	-	-					Z	Зев.	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	
011-04-MP-05N-S-18'-Q2	04-MP-0SN @ 18 foot depth	S 01	01/30/02	1500	ပ	14	3 1	1	1					Ŋ	3ea.	3ea. Encore, 1 ca. 8-oz., 1 ca. 4-oz	
011-04-MP-05N-S-38'-Q2	04-MP-05N @ 38 foot depth	S 01	01/30/02	1600	၁	14	3 1	1	1					z	Зсв.	3ea. Encore, 1 ea. 8-02., 1 ea. 4-02	
011-04-MP-05N-S-66'-Q2	04-MP-05N @ 66 foot depth	S 01	01/30/02	1635	ပ	14			-					Z	3ca	3ca. Encore, 1 en. 8-0z., 1 ca. 4-0z	
011-04-MP-05N-S-18'-Q2 MS	04-MP-05N @ 18 foot depth	S 01	01/30/02	1500	ပ	41	3 1	1	-					MS	3ea	3ea. Encore, 1 ca. 8-02., 1 ca. 4-02	
011-04-MP-05N-S-18'-Q2 SD	04-MP-05N @ 18 foot depth	S 01	20/0E/10	1500	၁	14	3.	1 1	1					SD	3ea	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	æ
011-04-MP-30E-S-18'-Q2	04-MP-30E @ 18 foot depth	S 01	01/30/02	1710	၁	14	3							Z	3ea	3ea. Encore, 1 ca. 8-oz., 1 ca. 4-oz	
PLEI(S) AND COMPANY (please print) Dunbar, CH2M Hill Constructors, Inic.	ructors, Inc.	* COURLER Fed-Ex A	* COURLER AND SHIPP Fed-Ex Airbill No.	» COURIER AND SHIPPING NUMBER: Fed-Ex Airbill No.	ان							, S,	MPLES TEN	PERATURE AND	CONDITIO	<sup>31</sup> SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use)	use):
73 RELINOUISHED BY	ISHED BY		DATE		TIME	3					" RECEIVED BY	VED BY			-	DATE	TIME
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						-	Tinled Nam	ne and Si		The	100				<del>  `</del>	70-18-	10:01
Name and Signature;							rieled Ne	ne and Si	mature:				H>		-		
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0-02		-939-8300,	50	Ga. 3034	0 (	Ga. 30346		H LAB ID (for lab's usc)		300		1 Assessed 1	1		,					(3)		TIME			10.07			000
. сос NUMBER:	nd Fax No.):	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	and Fax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	and Fax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181		" COMMENTS/ SCREENING READINGS	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	3ea. Encore, 1 ca., 8-0z.,	I ea. 4-0z	3ca. 40ml VOAs, 2 ca. 1 liter	3ea. 40ml VOAs							<sup>31</sup> SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lans use)		DATE			1-31-02		6 100000	Form CC1001, Rev 06/00
	* RECIPIENT I (Address, Tel No., and Fax No.)	1766 Sea Lark Lane, Nava (fax) 850-939-0035	is RECIPIENT 2 (Address, Tel No. , and Fax No.):	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9181	* RECIPIENT 3 (Address, Tel No., and Fax No.):	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9181		<sup>34</sup> SAMPLE TYPE (see codes on SOP)	Z	Z		သိ	TIB							MPERATURE AND CON								
(S)	" RECIPIE	1766 Se (fax) 85	" RECIPI				nbers)					·					-	1		AMPLES TE								l
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POY	FAX AND MAIL REPORTS/EDD TO:	Amy Twitty, CH2M Hill, Inc.	FAX AND MAIL REPORTS/EDD TO::	CH2M Hi	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	Bonnie I	JEQUIRED (										-	1							Ma			1py 2 - PMO
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CHA	LAB NAME AND CONTACT:	Accutest Laboratory, 2285 Rougel 19, BLDG B. Laform by 68840 22 x 1			AX NO:			TIME COLLECTED	747			1656	1030							IPPING NUMB		9	1/4					lurned with Analy
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113 Permeter Contor Place, Suste rou Allanta, GA 30346-1278 Tel Nex (770) 664-5982	* PROJECT NUMBER:	151168	* CTO OR DO NUMBER:	CTO-0011	PROJECT TEL NO AND FAX NO.	850-939-8300 ext. 17		"SAMPLE DESCRIPTION/LOCATION	04-MP-30E @ 43 foot depth		-84-N4F-10K @ 72 1001 depth-	Post Equipment Rinsate Blank	Trip Blank							l Print)	structors, Inc.	иѕнер ву	Min Les	Charles -				Distribution:     Original - Laboratory (To be returned with Analytical Report);     Copy I - Project File:     Copy I - PMO
CHZMHILL	TNAME	Vhiting Field	T PHASE/SITETASK:		CT CONTACT:	witty		" SAMPLE IDENTIFIER	011-04-MP-30E-S-43'-Q2		011-04-MP-30E-5-72-02	011-04-POSTEB-W-01- O2	011-04-TRIPB-W-01-Q2							LER(S) AND COMPANY: (please n	Dunbar, CH2M Hill Constructors, Inc.	<sup>11</sup> RELINQUISHED BY	The and Signature	Name and Signature		Name and Signature:		

Constructors, Inc.	Tel No. (770) 604-5182			CHAIN-OF-CUSTODY RECORD	Ż	-OF	<u>[</u> -	US	[0]	DY	RE	Ç	SED IN			TOCKINABIR	
TNAME	2000					-									15116	151168-020205-01	05-01
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niting Kield	151168	Accute Rd., C	Accutest Laboratory, 44 Rd., C-15,Orlando, FL 3	Accutest Laboratory, 4405 Vi Rd., C-15, Orlando, FL 32811	05 Vine-land 2811		Amy Twitty, CH2M Hill, Inc.	itty, CE	12M H	ill, Inc.			1766 S. (fax) 85	1766 Sea Lark Lane, N (fax) 850-939-0035	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	i6 (phone) 85	10-939-8300,
T PHASE/SITE/TASK:	" CTO OR DO NUMBER:	, LAB PC	LAB PO NUMBER:			= =	FAX AND MAIL REPORTS/EDD TO::	MAIL RE	PORTS/E	EDD TO:			" RECIPI	* RECIPIENT 2 (Address, Tel No., and Fax No.).	No., and Fax No.):		
	CTO-0011	PO 2379	62			υŭ	Christelle Newson Constructors, Inc.	Newso	me, Ci	Christelle Newsome, CH2M Hill, Constructors, Inc.			115 Per	rimeter Center	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346, Phone=770-604-9182 Fax=770,604-9181	100, Atlanta,	Ga. 303465
T CONTACT:	PROJECT TEL NO AND FAX NO:	"LAB.T	" LAB TEL NO AND FAX NO:	AX NO:		12 8	FAX AND MAIL REPORTS/EDD TO	MAIL RE	PORTS/E	DD TO:			" RECIPI	RECIPIENT 3 (Address, Tel No., and Fax No.):	Vo., and Fax No.):		$\int_{0}^{\infty}$
witty	850-939-8300 ext. 17	407-42	407-425-6700			FF	Tatiana Romanoya & Hill Constructors Inc.	tomano tructors	va & B	Tatiana Romanoya & Bonnie Hogue, Hill Constructors Inc.		СН2М	1	rimeter Center	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346	'00, Atlanta,	Ga. 30346
								ANALY	'SES REC	* ANALYSES REQUIRED (Include Method Numbers)	chude Me	thod Num	) Eg				
" SAMPLE IDENTIFIER	"SAMPLE DESCRIPTION/LOCATION	(9OZ no 2sboo sez)	21 DATE COLLECTED	TIME COLLECTED	(see codes on SOP)	(cajeuqa. qaka)	BTEX by 5035/8021B		TOC by 9060					34 SAMPLE TYPE (see codes on SOF)	rpe "COMMENTS/	SNTS/ EADINGS	<sup>18</sup> LAB ID (for lab's use)
)11-04-PREEB-W-02-Q2	Pre Equipment Rinsate Blank	Α	02/02/02	0060	<u> </u>	4	3 2	7						ос Ос	3en. 40ml VOAs, 2 en. 1.	As, 2 ca. 1-	
)11-04-MP-30E-S-72'-Q2	04-MP-30E @ 72 foot depth	S	02/02/02	2060	Ü	4	3	-	-			_		z	3ea. Encore, 1 ca. 8-0z.,	ca. 8-0z.,	
011-04-BKGD-S-22'-Q2	Background Location @ 22 foot depth	S	02/02/02	1255	υ	41	- n	-	-		-			z	3ea. Encore, 1 ca.	ca. 8-0z.,	
011-04-BKGD-S-43'-Q2	Background Location @ 43 foot depth	S	02/02/02	1345	υ	14	1 1	-	-					z	3ea. Encore, 1 ca. 8-0z.,	ca. 8-02.	
011-04-BKGD-S-72'-Q2	Background Location @ 72 foot depth	S	02/02/02	J8H1	ပ	14	3 1		-			-		z	3ea. Encore, 1 ea.	ea. 8-0z.,	
011-04-MP-20S-S-18'-Q2	04-MP-20S @ 18 foot depth	S	02/02/02	0860	υ	14	.r.	-						z	3ea. Encore, 1 ea.	ea. 8-0z.,	
911-04-MP-20S-S-43'-Q2	04-MP-20S @ 43 foot depth	S	02/05/02	5201	Ú	14	1 1		-			ļ		z	3ea. Encore, 1 ca. 8-0z.,	cn. 8-0z.,	
011-04-MP-20S-S-72'-Q2	04-MP-20S @ 72 foot depth	S	02/02/02	1115	U	41	3	-	-			_		z	3ea. Encore, 1 ca. 8-0z.,	ca. 8-0z.,	
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LIQ OTHER SOL - OTHER SOLID LAB USE ONLY TEMPERATURE COMMENTS/REMARKS ... ANALYTICAL INFORMATION SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY ACCUTEST QUOTE #: 2. RECEIVED BY: 4. PRESERVE WHERE APPLICABLE RECEIVED BY: DATE TIME: à PRESERVATION SNON ORLANDO, FL 32811 TEL: 407-425-6700 • FAX: 407-425-0707 10521 EON HOM DATA DELIVERABLE INFORMATION STANDARD
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# CHAIN OF CUSTODY 4405 VINELAND ROAD . SUITE C-15 OPLANDO, FL 32811 TEL: 407-425-5700 · FAX: 407-425-0707

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ACCUTEST QUOTE #: ACCUTEST JOB #:

DW-DRINKING
WATER
GW-GROUND
WW-WASTE
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# Z ACCUTEST.

# CHAIN OF CUSTODY 405 VINELAND ROAD . SUITE C-15 OPLANDO, FL 32811 TEL: 407-425-6700 · FAX: 407-425-0707

ACCUTEST QUOTE #:

ACCUTEST JOB #:

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спу,		STATE	42	PROJECT	T NO.												2 es e	SCUDGE SLUDGE OIL
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ACCUTEST					COLLECTION	z	XII	83	PRESERVATION	TION	)C							BOLID
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		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY	NUST BE D	OCUMEN	TED BELOV	/ EACH TII	UE BAN	PLES CI	ANGE	3880	NON, IN	CLUDING	COUR	ER DEL	VERY	A PART LA		
19,4005	1000	8) 400 B	1.	15. E.		7	2. T	F-19		\$ 1.7°	, l	0532	RECEIVED BY		1			
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	CHAIN OF CUSTODY	ACCUTEST JOB #:
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	TEL: 407-425-8700 • FAX: 407-425-0707	
IT INFORMATION	FACILITY INFORMATION CONTRACTOR TO THE PROPERTY OF THE PROPERT	FACILITY INFORMATION CONTRACTOR ANALYTICAL INFORMATION CONTRACTOR MATRIX CODES
- 00	لدرى ترس	

TEMPERATURE WATER GW- GROUND WATER WW- WASTE WATER SO- SOIL LAB USE ONLY SO SOIL SL SLUDGE OI OIL LIQ OTHER SOL OTHER SOL OTHER 7班/ COMMENTS/REMARKS **8**□ Na Carre PRESERVE WHENE APPLICABLE ALNIT- AL PRESERVATION DOSZI COM DATA DELIVERABLE INFORMATION HOTH НСІ ナカウオ #O# BOTTLES 2. C. NELINGUIGHED BY: 4. ā XXXIV F15055 SEAL O SAMPLED BY: におまり STANDARD
COMMERCIAL "B"
DISK DELIVERABLE
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(2) OTHER (SPECIFY) COLLECTION 1550 38 3 PROJECT NAME PROJECT NO. LOCATION Calabo DATE FAX# RECEIVED BY: 5. **ZIP** FIELD ID / POINT OF COLLECTION લં F13055-15 -APPROVED BY: DATA TURNAROUND INFORMATION DATE TIME: STATE 48 HOUR RUSH
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MERGENCY OR RUSH IS FAX DATA
NUSS PREVIOUSLY APPROVED BITO THE STANDARD HIND REPORT TO: LINQUISHED BY: ACCUTEST SAMPLE # ADDRESS HONE # Ĕ

# ACCUTEST.

# CHAIN OF CUSTODY 4405 VINELAND ROAD • SUITE C-15 ORLANDO, FL. 32811 TEL: 407-425-8700 • FAX: 407-425-0707

ACCUTEST QUOTE #: ACCUTEST JOS #:

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Appendix B
Data Validation Checklists

# QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Volatile Organic Analytes by GC/MS

Project File(s) F11289, F11298, F11333		Sampling Date(s)	10/22/02, 10/23/02, 10/26/01		
Laboratory	Accutest - Orlando FL		Receipt Date(s)	Next Day	
SDG Number	F11289		Matrix	☐ Water ☐ Air	
				Soil/Sediment with aqueous field QC samples	
Sample Identification Numbers:					
F11289-01 <sup>EB</sup>	F11289-06	F11298-03	F11333-01 TB	F11333-06	
F11289-02	F11289-07 <sup>EB</sup>	F11298-04	F11333-02 EB	F11333-07	
F11289-03	F11289-08 <sup>TB</sup>	F11298-05	F11333-03	F11333-08	
F11289-04 FD	F11298-01 <sup>TB</sup>	F11298-06	F11333-04	F11333-09	
F11289-05	F11298-02 <sup>EB</sup>	F11298-07 <sup>EB</sup>	F11333-05	F11333-10 <sup>EB</sup>	
Hazardou Analytica USEPA O Data Revi USEPA S USEPA S USEPA S USEPA S Other: Laboratory est: The following matrix spike / blank results.	s Waste Remedial A I Data (HAZWRAP D Contract Laboratory Priew (EPA-540/R-94/0 W846 (SW-846) Me Orinking Water (DW) Center for Environmentablished accuracy and parameters were examatrix spike duplication field, trip, and/or	Actions Program OOE/HWP-65/R2 rogram (CLP) Na 012, February 199 thods (8260) Methods (524.2, ental Excellence ( precision control amined: holding ( ate (MS/MSD) re rinsate blank re	(HAZWRAP) Req ) tional Laboratory Fu (3) 624, 1624) AFCEE) QAPP Vers limits. time and sample pro sults, laboratory cor sults, field duplica	surance were based on: uirements for Quality Control of unctional Guidelines for Organic  sion 3.0  eservation, surrogate spike results, ntrol sample (LCS) results, method te results, instrument tuning and ance, and quantitation limits.	
Reviewed by:	Chin U	hlad		Date: 6/05/02	
QA Concurren	ice by:			Date:	

E\*Data, Inc. Volatiles by GC/MS Data Validation Checklist June 2002

## **Validation Summary**

The MS/MSD recoveries for ethylbenzene and xylene were below the lower control limit. The presence of these parameters in the primary sample may have interfered with the analyses. The results of the primary sample have been qualified as estimated and flagged "J" for ethylbenzene and xylene.					
·					

Validation Summary (cont.)	
	_
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	_
	_

**Qualifiers:**U - Not detected. R - Unusable.

J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

E\*Data, Inc. Volatile Validation Checklist June 2002

# HOLDING TIME AND SAMPLE PRESERVATION I. No Yes All samples were handled and preserved according to requirements. All samples were extracted and analyzed within holding time criteria. The following deficiencies were found: Qualifier Analysis Extraction Sample ID Preservation Collection Matrix Date Date Flag Date Remarks:

E*Data,	Inc.	
Volatile	Validation	Checklist
June 200	32	

#### II. SURROGATE SPIKE RECOVERIES

Sample ID	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4
<u>,,</u>				
		·		

		QC Limits			
Surrogate	Name	Water	Soil		
SMC1 (DFM)	Dibromofluoromethane	80 – 120	75 – 125		
SMC2 (TOL)	Toluene-d8	80 – 120	75 – 125		
SMC3 (BFB)	p-Bromofluorobenzene	80 – 120	72 – 137		
SMC4 (DCB)	1.2-dichlorobenzene-d4	80 – 120	68 – 125		

Remarks:			

III.	MATRIX SPIKE/MATRIX SPIKE	DUPLICA	TE ANALY	YSIS						
Yes	No  Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG.  MS/MSD analysis was performed on sample <u>F11298-06</u> found in SDG# <u>F11298</u> and sample <u>F11333-07</u> found in SDG# <u>F11333</u> .  All recoveries and relative percent differences (RPDs) were within control limits.									
The follo	owing deficiencies were found:									
Matrix	Analyte	MS Recover	MSI Recove	- 1	MS/MSD QC Limits	RPD	RPD Limit			
	D Summary: Unacceptable recoveriem III in data package.	es per the tota	al number o	f matri	x spike reco	veries in	the fraction.			
Sample	ID <b>F11298-06</b>		Sample ID		F11333	-07				
SDG	F11298 Matrix So		SDG	F113	33	Matrix	Soil			
RPD	0 out of 4 outside l	imits I	RPD .	0	out of		utside limits			
Spike R	ec. 0 out of 8 outside l	imits	Spike Rec.	0	out of	<b>8</b> ou	tside limits			
Remark	s:									
		,								
	Note: No action will be taken base	ed on MS/M	SD data al	one. S	amole resu	lts mav ł	e affected			

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

LCS ID	Matri	ix C	Compo	ound			%R	1	ntrol nits	Qualifie Flags
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	1	- 1					ł	1		
LCS Summary	: Unaccep	ptable	recov	eries for each LC	CS analysis	in the S	SDG.			
	293-BS	Ma	recov	eries for each LC Water	CS analysis		79-BS		ıtrix:	Soil
CS ID VB	293-BS					VG4	79-BS	Ma Out of	ntrix:	Soil Outside Limi
CCS ID VB Spike Recovery	293-BS 0	Ma Out of	atrix:	Water Outside Limits	LCS ID Spike Reco	VG4	79-BS 0	Out of	4	Outside Limi
Spike Recovery  LCS ID VH	293-BS 0 443-BS	Ma Out of Ma	4 atrix:	Water Outside Limits Soil	LCS ID  Spike Reco	VG4 overy VB2	79-BS 0 94-BS	Out of Ma	4	Outside Limi
Spike Recovery  LCS ID VH	293-BS 0 443-BS	Ma Out of Ma Out of	atrix:	Water Outside Limits Soil Outside Limits	LCS ID  Spike Reco	VG4  overy  VB29  overy	79-BS 0 94-BS 0	Out of Ma Out of	4	Outside Limi  Water  Outside Limi
CCS ID VB Spike Recovery  LCS ID VH Spike Recovery	293-BS 0 443-BS 0	Ma Out of  Ma Out of  Ma	4 atrix:	Water Outside Limits Soil	LCS ID  Spike Reco	VG4  overy  VB29  overy	79-BS 0 94-BS 0 83-BS	Out of Ma Out of	4	Outside Limi
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Spike Recovery  LCS ID VH  Spike Recovery  LCS ID VG  Spike Recovery	293-BS 0 443-BS 0 482-BS	Ma Out of  Ma Out of  Out of  Out of	4 atrix:	Water Outside Limits Soil Outside Limits Soil	LCS ID  Spike Reco  LCS ID  Spike Reco  LCS ID	VG4  overy  VB2  overy  VG4  overy	79-BS 0 94-BS 0 83-BS	Out of Out of Out of Ma	4  atrix: _	Outside Limi Water Outside Limi Soil
Spike Recovery  LCS ID VH  Spike Recovery  LCS ID VG  Spike Recovery  LCS ID VG	293-BS 0 443-BS 0 482-BS 0	Ma Out of  Ma Out of  Out of  Out of	atrix: 4 atrix: 4 atrix: 3	Water Outside Limits Soil Outside Limits Soil	LCS ID Spike Reco LCS ID Spike Reco LCS ID Spike Reco	VG4  overy  VB2  overy  VG4  overy	79-BS 0 94-BS 0 83-BS	Out of  Ma Out of  Ma Out of	4  Atrix:  4  Atrix:  4	Outside Limi  Soil  Outside Limi
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LABORATORY CONTROL SAMPLE

IV.

### V. BLANK ANALYSIS RESULTS

A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

Matrix	Compound	Conc	Action Level	Associated Samples
Water	All target parameters less than RL			
Soil	All target parameters less than RL			
Soil	All target parameters less than RL			
Water	All target parameters less than RL			
Soil	All target parameters less than RL			
Soil	All target parameters less than RL			
Water	All target parameters less than RL			
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	Water Soil Soil Water Soil Soil Water	Water All target parameters less than RL Soil All target parameters less than RL Soil All target parameters less than RL Water All target parameters less than RL Soil All target parameters less than RL Soil All target parameters less than RL Water All target parameters less than RL Water All target parameters less than RL	Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Water All target parameters less than RL	Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Water All target parameters less than RL

Remarks: All method blanks were absent target parameters at concentrations greater than the report limits.	
An mound diamage was a second larger particular and a second l	
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ield QC asso		C samples we this SDG we		ed with t	this SDG.			
1	rip Blanks				Equipme	nt Ri	nsate Blanks	
F11289-08 <sup>TB</sup>		F11289-0	1 <sup>EB</sup>	F11333-02 <sup>EB</sup>				
F11298-01	<del></del>		F11289-0		F11333-10 <sup>1</sup>	EB		
F11333-01			F11298-02 <sup>EB</sup>					
			F11298-0	)7 <sup>EB</sup>				
					Level			
Blank ID	Matrix	Compoun	d	Conc	Action	As	sociated Samples	
					Level	-		·
	-				1	-		
						-		
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						1		
	<del>                                     </del>					1		
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VI. FI	ELD PRECISIO	N RESULTS										
Yes No	— ( · · · · · · · · · · · · · · · · · ·											
Note: In the	he absence of pro	ject specified cr	iteria the follov	ving guidelines a	re recommen	ded:						
	For sample results >5 x the RL, the RPD between field duplicate samples was <40% for											
	water samples (70% for soil samples).  For sample results <5 x the RL, the RPD between field duplicate samples was less than the RL for water samples (less than 2x the RL for soil samples).											
Field Sam	ple/Duplicate ID	: <u>F11289-04/-05</u>	Matrix: S	<u>oil</u>								
field duplic	ate.	ce (RPD) is calcul	-		ified in either t	he sample or						
		Field Precision E	valuation Defic	A = B =	B)/2 Sample Resul Duplicate San t:							
Analyte	RL	5 x RL	Sample Result	Duplicate Result	RPD	Action						
Benzene	2300	11500	ND	ND	NC	None						
Toluene	2300	11500	ND	118	NC	None						
Ethylbenze	ne 2300	11500	38400	15900	83%	J detects						
Xylene	6900	34500	91000	38800	80%	J detects						
Remarks:												

NC is not calculated due to concentration levels less than 5 times the RL.

m/z	Required Abundance	Actual Abundance	
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GC/MS TUNING - INSTRUMENT PERFORMANCE

VII.

### VIII. INITIAL AND CONTINUING CALIBRATIONS

Yes	No	
$\boxtimes$		The average relative response factors (RRF <sub>wg</sub> ) met validation criteria for all initial
		calibrations. $RF > 0.05$
$\boxtimes$		The percent relative standard deviation (%RSD) of the calibration or response factors (or
		correlation coefficients for regression analysis of calibration curves) met validation criteria
		for all initial calibrations. $\frac{\text{%RPD} \leq 15, \text{ if } 1^{\text{st}} \text{ order fit then } r > 0.995}{\text{ order fit then } r > 0.995}$
$\boxtimes$		Continuing calibrations were performed at the specified frequency. 1 per 12 hour sequence
$\boxtimes$		The RRFs met validation criteria for all continuing calibrations. $RRF > 0.05$
$\boxtimes$		The percentage difference (%D) from the initial calibration met validation criteria for all
		continuing calibrations. ±25%D

The following deficiencies were found:

Instr	Date/		I	Calibration	Affected Samples	Action
ID	Time	Analyte	/ C	Deficiency	Affected Samples	Action
MSVOA4	10/09/01	All parameters are within control limits	I	RRF%RSD %		
MSVOA1	10/25/01 10/30/01	within control limits				
MSVOA3	10/19/01			Frequency		
MSVOA5	10/29/01					
MSVOA2	11/01/01					
MSVOA3	11/05/01	All parameters are	C	RRF		
	at 10:17	within control limits	l	%RSD%		
				% 		
			•	Frequency		
MSVOA4	10/25/01	All parameters are	$\frac{1}{c}$	RRF		
10000011	at 09:08	within control limits		□%RSD %		
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		□%D %		
				Frequency		
				r		
MSVOA1	10/25/01	All parameters are	C	RRF		
	at 13:22	within control limits		☐%RSD%		
				% %		
				Frequency		
MSVOA4	10/26/01	All parameters are	$\frac{1}{c}$	RRF		
1/15 / 0111	at 09:54	within control limits		%RSD %		
				□%D%		
				Frequency		
			$oldsymbol{ol}}}}}}}}}}}}}}}}}$	□r		
MSVOA1	11/02/01	All parameters are	C			
	at 12:00	within control limits		%RSD%		
				□%D%		
				Frequency		
ì	1			<u>                                      </u>	1	

## Calibration Deficiencies Table, cont.

Instr ID	Date/ Time	Analyte	I / C	Calibration Deficiency	Affected Samples	Action
MSVOA1	11/05 /01 at 13:26	All parameters are within control limits	C	RRF  %RSD %  "MD %  Frequency r		
MSVOA5	10/30 /01 at 10:17	All parameters are within control limits	C			
MSVOA2	11/05 /01 at 11:30	All parameters are within control limits	2			
Ren	narks:					

The	following deficiencies	were found:								
ample ID	Internal Standard	Sample IS Area	a Limits Lower	Sample IS RT	IS RT Limit Upper Lowe					
	Stalica		Upper			34444444				
		:								
							<del> </del>			
							1-			
							<u> </u>			
	<u> </u>			······································						
Internal Sta	andard		Name	<u></u>						
IS1(DFB)			1,4-Difh	1,4-Diflurorbenzene						
IS2CBZ)				Chlorobenzene-d5						
IS3(DCB)				lorobenzene-	14					
IS4			Not app	ncable						
Remarks:										

INTERNAL STANDARDS

IX.

Χ.	QUANT	TITATIO	N LIMIT RESUL	TS					
Yes ⊠ □	No No deficiencies were found.  Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met.								
The fo	The following deficiencies were found:								
	Sample	ID	Comp	ound(s)	RQL	CRQL	Action		
F1129	8-06		Toluene – See	Note 1					
				1					
Analy elevated -05, -									
	Analyte		Reported Value	Recalculated Value		Samples			
	<del></del>								
Rem	arks:				•				

E\*Data, Inc. Volatile Validation Checklist June 2002

Calculations were spot-checked.

Page 1 of 1

Client Sample ID: 011-04-PREEB-W-02-Q3

Lab Sample ID:

F13055-8

Matrix:

AQ - Field Blank Soil

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: n/a

**Prep Date Prep Batch** 

Run #1 Run #2 File ID OP20761.D DF

Analyzed 05/07/02

By ME

05/06/02

OP5090

**Analytical Batch** 

GOP771

Initial Volume **Final Volume** 

Run #1 850 ml 1.0 ml

Run #2

CAS No. Compound

Result

RL

Units Q

TPH (C8-C40)

**0.30** 

mg/l (人

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

94%

55-130%

mus 6/28/62

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13055-9

Matrix:

SO - Soil

Method:

FLORIDA-PRO SW846 3550B

**Date Sampled:** 04/30/02

Date Received: 05/01/02 Percent Solids: 93.7

NAS Whiting Field CTO-0011 Project:

File ID Run#1

OP20784.D

Analyzed 05/08/02

By ME **Prep Date** 05/06/02

**Prep Batch** OP5088

**Analytical Batch** 

GOP771

Run #2

**Initial Weight Final Volume** 

Run #1

1.0 ml

DF

1

Run #2

CAS No. Compound

30.8 g

Result

RL

Units Q

TPH (C8-C40)

mg/kg

CAS No.

**Surrogate Recoveries** 

**Run#1** 

Run# 2

Limits

84-15-1

o-Terphenyl

97%

66-130%

onne 6/28/02

ME

Page 1 of 1

Client Sample ID: 011-04-MP-FD1-S-100'-Q3

Lab Sample ID:

F13055-10

Matrix:

File ID

30.8 g

OP20785.D

SO - Soil

FLORIDA-PRO SW846 3550B

05/08/02

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

**OP5088** 

**GOP771** 

Percent Solids: 91.3

**Prep Date Prep Batch Analytical Batch** DF Analyzed By

05/06/02

Run #1 Run #2

Method: Project:

> **Final Volume Initial Weight**

Run #1

1.0 ml

Run #2

RL Units Q CAS No. Compound Result

TPH (C8-C40)

mg/kg

Limits CAS No. Surrogate Recoveries Run#1 Run#2

84-15-1 66-130% o-Terphenyl 91%

mie 6/02

Page 1 of 1

Client Sample ID: 011-04-MP-05N-S-18'-Q3

Lab Sample ID:

F13055-11

Matrix:

SO - Soil

FLORIDA-PRO SW846 3550B

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 87.6

Method: Project:

NAS Whiting Field CTO-0011

Run #1

File ID OP20786.D DF 1

Analyzed By 05/08/02 ME **Prep Date** 05/06/02

**Prep Batch** OP5088

**Analytical Batch** 

GOP771

Run #2

Initial Weight

**Final Volume** 

Run #1

31.0 g

1.0 ml

Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

23.9

9.2

mg/kg

CAS No.

**Surrogate Recoveries** 

Run# 1

Run#2

Limits

84-15-1

o-Terphenyl

91%

66-130%

0m20 6/28/02

0054

Client Sample ID: 011-04-MP-05N-S-38'-Q3

Lab Sample ID:

F13055-12

Matrix:

SO - Soil

Method: Project:

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02 Date Received: 05/01/02

Percent Solids: 90.4

**Prep Date Prep Batch** 

Run#1

File ID OP20804.D

Analyzed 05/08/02

By ME

05/06/02

**OP5088** 

**Analytical Batch** 

**GOP771** 

Run #2

**Final Volume Initial Weight** 

Run #1

1.0 ml

DF

1

Run #2

CAS No. Compound

31.1 g

Result

RL

Units Q

TPH (C8-C40)

19.5 8.9

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

100%

66-130%

cum Glador

Page 1 of 1

Client Sample ID: 011-04-MP-05N-S-66'-Q3

Lab Sample ID:

F13055-13

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 90.5

Project:

Run #1

File ID OP20791.D DF 1

Analyzed 05/08/02

By ME **Prep Date** 05/06/02

**Prep Batch OP5088** 

**Analytical Batch** 

**GOP771** 

Run #2

Initial Weight **Final Volume** 

Run #1 Run #2 1.0 ml

CAS No.

Compound

31.1 g

Result

RL

Units Q

TPH (C8-C40)

8.9

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

98%

66-130%

Omus 6/25/ce

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-18'-Q3

Lab Sample ID:

F13055-14

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 89.0

**Analytical Batch** Prep Date **Prep Batch** File ID DF Analyzed By **OP5088** Run#1

Project:

OP20792.D

05/08/02

ME

05/06/02

**GOP771** 

Run #2

**Initial Weight** 

30.6 g

**Final Volume** 1.0 ml

Run #1 Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

14.6

9.2

mg/kg

CAS No.

**Surrogate Recoveries** 

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

89%

66-130%

00000 6/28/02

Client Sample ID: 011-04-MP-10W-S-43'-Q3

Lab Sample ID: Matrix:

F13055-15

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

**Date Sampled:** 04/30/02

Date Received: 05/01/02 Percent Solids: 94.0

**Analytical Batch Prep Date Prep Batch** By File ID DF Analyzed **OP5088** Run#1

Run #2

Method:

Project:

OP20793.D

1

05/08/02

ME

05/06/02

GOP771

**Initial Weight** Final Volume

Run#1

1.0 ml

Run#2

CAS No. Compound

29.6 g

Result

RL

Units O

TPH (C8-C40)

7.67 9.0

mg/kg J

CAS No.

**Surrogate Recoveries** 

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

96%

66-130%

onio 668/02

Client Sample ID: 011-04-MP-10W-S-72'-Q3

Lab Sample ID:

F13055-16

Matrix:

SO - Soil

FLORIDA-PRO SW846 3550B

Method: Project:

NAS Whiting Field CTO-0011

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 92.2

**Analytical Batch Prep Batch Prep Date** By File ID DF Analyzed GOP771 **OP5088** 05/06/02 ME OP20794.D 1 05/08/02 Run #1

Run #2

**Final Volume** Initial Weight

Run #1

1.0 ml

Run #2

Units Q RL Result CAS No. Compound

TPH (C8-C40)

8.7 29.5 mg/kg

**Surrogate Recoveries** CAS No.

31.2 g

Limits Run#1 Run# 2

84-15-1

o-Terphenyl

93%

66-130%

mus 6/28/cz

Client Sample ID: 011-04-MP-FD2-S-100'-Q3

Lab Sample ID:

F13055-17

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B

**Final Volume** 

Date Sampled: 04/30/02

Date Received: 05/01/02

Percent Solids: 89.3

Project:

NAS Whiting Field CTO-0011

File ID Run #1

OP20795.D

Analyzed 05/08/02

By ME **Prep Date** 05/06/02

**Prep Batch OP5088** 

**Analytical Batch** 

GOP771

Run #2

**Initial Weight** 

Run #1

1.0 ml

DF

1

30.5 g

Run #2 CAS No.

Compound

Result

RL

Units Q

TPH (C8-C40)

18.4

9.2

mg/kg

CAS No.

Surrogate Recoveries

Run#1

Run# 2

Limits

84-15-1

o-Terphenyl

98%

66-130%

Omo 6/20/02

Page 1 of 1

Client Sample ID: 011-04-PREEB-W-03-Q3

Lab Sample ID:

F13066-1

Matrix: Method:

Project:

AQ - Field Blank Water

DF

1

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: n/a

Prep Date Prep Batch

Run #1 Run #2 File ID OP20763.D Analyzed 05/07/02

By ME

05/06/02

**OP5090** 

**Analytical Batch** GOP771

Initial Volume **Final Volume** 

Run #1

1.0 ml

Run #2

CAS No. Compound

930 ml

Result

 $\mathbf{RL}$ 

Units Q

TPH (C8-C40)

0.28 ND

mg/l (

CAS No.

Surrogate Recoveries

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

99%

55-130%

0mp 6/28/02

Client Sample ID: 011-04-MP-20S-S-18'-Q3

Lab Sample ID:

F13066-2

Matrix:

SO - Soil

FLORIDA-PRO SW846 3550B

Method: Project:

NAS Whiting Field CTO-0011

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Percent Solids: 87.8

**Analytical Batch Prep Date Prep Batch** File ID DF Analyzed By GOP771 Run #1 OP20796.D 1 05/08/02 ME 05/06/02 **OP5088** 

Run #2

Final Volume **Initial Weight** 

Run #1

1.0 ml

Run #2

CAS No. Compound

29.5 g

Result

RL

Units Q

9.32 9.7

mg/kg J

CAS No.

**Surrogate Recoveries** 

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

TPH (C8-C40)

93%

66-130%

0mmo 6/28/02

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13066-3

Matrix: Method:

Project:

SO - Soil

FLORIDA-PRO SW846 3550B

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

Date Received: 05/02/02 Percent Solids: 91.1

**Prep Batch Prep Date** 

Run #1 Run #2 File ID

DF 1

Analyzed 05/08/02

By

**OP5088** 

OP20797.D

ME

05/06/02

**Analytical Batch** 

**GOP771** 

**Initial Weight** 29.6 g

**Final Volume** 

Run #1 Run #2  $1.0 \, \mathrm{ml}$ 

CAS No. Compound

Result

RL

Units Q

TPH (C8-C40)

ND 9.3

mg/kg 【人

CAS No.

**Surrogate Recoveries** 

Run#1

**Run#2** 

Limits

84-15-1

o-Terphenyl

94%

66-130%

0m106/28/ez

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID:

F13066-4

Matrix: Method: SO - Soil

FLORIDA-PRO SW846 3550B

Project:

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

Date Received: 05/02/02

Percent Solids: 93.2

Analyzed By **Prep Date Prep Batch** File ID DF 05/06/02 **OP5088** 05/08/02 ME Run #1

Run #2

OP20798.D

1

**Analytical Batch** 

**GOP771** 

**Initial Weight** 

30.8 g

**Final Volume** 1.0 ml

Run #1 Run #2

CAS No. Compound Result

RL

Units Q

TPH (C8-C40)

10.3 8.7

mg/kg

Surrogate Recoveries CAS No.

Run# 1

Run#2

Limits

84-15-1

o-Terphenyl

96%

66-130%

anu 6/28/02

Client Sample ID: 011-04-POSTEB-W-01-Q3

Lab Sample ID:

F13066-5

Matrix:

AO - Field Blank Water

Method: Project:

FLORIDA-PRO SW846 3510C

NAS Whiting Field CTO-0011

Date Sampled: 05/01/02

05/02/02

Date Received:

Percent Solids: n/a

**Analytical Batch Prep Batch Prep Date** By Analyzed File ID DF GOP771 05/06/02 **OP5090** ME 1 05/07/02 OP20768.D Run #1

Run #2

**Final Volume Initial Volume** 910 ml

Run #1

 $1.0 \, \mathrm{ml}$ 

Run #2

Compound CAS No.

Result

RL Units Q

TPH (C8-C40)

0.28 ND

mg/l ()

Surrogate Recoveries CAS No.

Run#1

Run#2

Limits

84-15-1

o-Terphenyl

99%

55-130%

mw6/28/02

Wet Chemistry Analyses

Client Sample ID: 011-04-BKGD-S-22'-Q1

Lab Sample ID: F11289-2

Matrix:

SO - Soil

Date Sampled: 10/22/01

Date Received: 10/23/01 Percent Solids: 86.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Units DF Analyzed By Method **Analyte** 

1 10/30/01 EP EPA 160.3 M Solids, Percent CORP ENG 81 M 10/26/01 ANJ <1200 LA 1200 **Total Organic Carbon** mg/kg

mo 6/28/02

Client Sample ID: 011-04-BKGD-S-43'-Q1

Lab Sample ID: Matrix:

F11289-3

Date Sampled: 10/22/01

SO - Soil

Date Received: 10/23/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 94.7

#### **General Chemistry**

Analyte	Result $\mathcal{Q}$ RL	Units	DF	Analyzed By	Method
Solids, Percent	94.7	%	1	10/30/01 EP	EPA 160.3 M
Total Organic Carbon	<1000 U 1000	mg/kg	1	10/26/01 ANJ	CORP ENG 81 M

mw (dzeloz

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-18'-Q1

Lab Sample ID: F11289-4
Matrix: SO - Soil

Date Sampled: 10/22/01 Date Received: 10/23/01 Percent Solids: 90.5

Project: NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result	RL	Units	DF	<b>Analyzed By</b>	Method
Solids, Percent Total Organic Carbon	بك 90.5 <1100 لا		% mg/kg	1	10/30/01 EP 10/26/01 ANJ	EPA 160.3 M CORP ENG 81 M

Chino 6/28/02

Client Sample ID: 011-04-MP-30E-S-30'-Q1

Lab Sample ID: F11289-5

Matrix:

SO - Soil

Date Sampled: 10/22/01

Date Received: 10/23/01

Percent Solids: 90.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method DF Analyzed By Result () Units Analyte

EPA 160.3 M 1 10/30/01 EP Solids, Percent <1100 / 1100 10/26/01 ANJ CORP ENG 81 M mg/kg 1 Total Organic Carbon

Omno 6/28/02

## nalysis

Accutest Laboratories

Accutest Laboratories
Client Sample ID: 011-04-MP-30E-S-43'-Q1
Lab Sample ID: F11289-6
Constant Series Series Page 10/22/01
Date Received: 10/23/01

Percent Solids: 93.5

Project:

NAS Whiting Field CTO-0011

#### **General Chemistry**

Analyte	Result Q RL	Units	DF	Analyzed By	Method
Solids, Percent	93.5	%	1	10/30/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg		10/26/01 ANJ	CORP ENG 81 M

CMW 6/28/02

Client Sample ID: 011-04-MP-30E-S-72'-Q1

Lab Sample ID: F11298-3
Matrix: SO - Soil

Date Sampled: 10/23/01 Date Received: 10/24/01 Percent Solids: 92.2

Project:

NAS Whiting Field CTO-0011

#### **General Chemistry**

Analyte	Result Q RL	Units	DF	Analyzed By	Method
Solids, Percent	92.2	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 ( 1100	mg/kg	1	10/29/01 ANJ	CORP ENG 81 M

mis 6/28/02

Page 1 of 1

Client Sample ID: 011-04-BKGD-S-72'-Q1

Lab Sample ID: F11298-4 Matrix:

SO - Soil

**Date Sampled:** 10/23/01 Date Received: 10/24/01 Percent Solids: 92.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result 👱 RL	Units	DF	Analyzed By	Method
Solids, Percent	92.1	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 () 1100	mg/kg	1	10/29/01 ANJ	CORP ENG 81 M

cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10N-S-18-Q1

Lab Sample ID: Matrix:

F11298-5 SO - Soil

**Date Sampled:** 10/23/01

Date Received: 10/24/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 87.2

#### **General Chemistry**

Analyte	Result 🖳 RL	Units	DF	Analyzed By	Method
Solids, Percent	87.2 <1100 \( \) 1100	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg	1	10/29/01 anj	CORP ENG 81 M

mo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10N-S-38-Q1

Lab Sample ID: F11298-6

Matrix: So

SO - Soil

**Date Sampled:** 10/23/01

Date Received: 10/24/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 90.2

#### **General Chemistry**

Analyte	Result 📿 RL	Units	DF	Analyzed By	Method
Solids, Percent	90.2	%	1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 \ \ \ 1100	mg/kg	1	10/29/01 ANJ	CORP ENG 81 M

Cumo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-5N-S-66'-Q1

Lab Sample ID: F11333-3
Matrix: SO - Soil

**Date Sampled:** 10/25/01 **Date Received:** 10/27/01 **Percent Solids:** 89.9

**Project:** NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Analyzed By Method

Solids, Percent 89.9 % 1 11/01/01 EP EPA 160.3 M

Total Organic Carbon 1100 mg/kg 1 11/08/01 ANJ CORP ENG 81M/SW9060M

ma 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-18-Q1

Lab Sample ID: Matrix: F11333-4 SO - Soil **Date Sampled:** 10/25/01 **Date Received:** 10/27/01

**Date Received:** 10/27/01 **Percent Solids:** 87.7

Project:

NAS Whiting Field CTO-0011

General Chemistry

Units DF **Analyzed By** Method Analyte 11/01/01 EP EPA 160.3 M Solids, Percent 87.7 1 mg/kg 1 11/08/01 ANJ CORP ENG 81M/SW9060M **Total Organic Carbon** <1100

mus 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-43-Q1

Lab Sample ID: Matrix:

F11333-5

SO - Soil

**Date Sampled:** 10/25/01 Date Received: 10/27/01

Percent Solids: 83.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result Q RL Units DF Analyzed By Method Analyte

1 11/01/01 EP EPA 160.3 M Solids, Percent

<1200 11/08/01 ANJ CORP ENG 81M/SW9060M mg/kg 1 **Total Organic Carbon** 

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-18-Q1

Lab Sample ID: F11333-6 Matrix: SO - Soil Date Sampled: 10/26/01 Date Received: 10/27/01 Percent Solids: 89.3

**Project:** NAS Whiting Field CTO-0011

**General Chemistry** 

Result RL Units DF Analyzed By **Analyte** Method Solids, Percent 1 11/01/01 EP EPA 160.3 M <1100 U **Total Organic Carbon** 1100 mg/kg 1 11/08/01 ANJ CORP ENG 81M/SW9060M

CMW6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-43-Q1

Lab Sample ID:

F11333-7 SO - Soil

Date Sampled: 10/26/01 Date Received: 10/27/01

Matrix: Project:

NAS Whiting Field CTO-0011

Percent Solids: 93.4

#### **General Chemistry**

Analyte	Result (X) RL	Units D	F Analyzed By	Method
Solids, Percent	93.4	% 1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg 1	11/08/01 ANJ	CORP ENG 81M/SW9060M

Cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-20S-S-72-Q1

Lab Sample ID: Matrix:

F11333-8

**Date Sampled:** 10/26/01

SO - Soil

Date Received: 10/27/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 91.7

#### **General Chemistry**

Analyte	Result Q RL	Units DF	Analyzed By	Method
Solids, Percent	91.7	% 1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg 1	11/08/01 ANJ	CORP ENG 81M/SW9060M

CMD 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-72-Q1

Lab Sample ID:

F11333-9

**Date Sampled:** 10/26/01

Matrix:

SO - Soil

Date Received: 10/27/01

Project:

NAS Whiting Field CTO-0011

Percent Solids: 90.0

#### **General Chemistry**

Analyte	Result 🖳 RL	Units DF	Analyzed By	Method
Solids, Percent	90	% 1	11/01/01 EP	EPA 160.3 M
Total Organic Carbon	<1100 以 1100	mg/kg 1	11/08/01 ANJ	CORP ENG 81M/SW9060M

como 6/25/02

Client Sample ID: 011-04-MP-10W-S-18'-Q2

Lab Sample ID: Matrix:

F12178-2

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 87.0

**General Chemistry** 

C) RL Method Units DF Analyzed By Analyte 02/01/02 YA EPA 160.3 M 1 Solids, Percent CORP ENG 81M/SW9060M 02/13/02 ANJ 1 mg/kg Total Organic Carbon

0,000 6/28/02

Client Sample ID: 011-04-MP-10W-S-43'-Q2

F12178-3 Lab Sample ID: Matrix:

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02 Percent Solids: 91.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result Q Analyzed By Method RLUnits DF Analyte 02/01/02 YA 1 EPA 160.3 M Solids, Percent

02/13/02 ANJ <1100 U mg/kg CORP ENG 81M/SW9060M **Total Organic Carbon** 

cmus 6/28/02

Client Sample ID: 011-04-MP-10W-S-72'-Q2

Lab Sample ID: Matrix:

F12178-4

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: 88.4

Project:

NAS Whiting Field CTO-0011

General Chemistry

Analyte	Result $\Theta$ RL	Units D	F Analyzed By	Method
Solids, Percent	88.4	% 1	02/01/02 YA	EPA 160.3 M
Total Organic Carbon	<1100 <b>(</b> ) 1100	mg/kg 1	02/13/02 ANJ	CORP ENG 81M/SW9060M

Como 6/28/cz

Client Sample ID: 011-04-MP-05N-S-18'-Q2

Lab Sample ID:

F12178-5

SO - Soil

Date Sampled: 01/30/02

Date Received: 01/31/02 Percent Solids: 88.3

Project:

Matrix:

NAS Whiting Field CTO-0011

1560

**General Chemistry** 

Total Organic Carbon

Analyzed By Method Result (2) RL Units DF Analyte 02/01/02 YA EPA 160.3 M % 1 88.3 Solids, Percent 02/13/02 ANJ CORP ENG 81M/SW9060M

1100

mg/kg

cmo 6/28/02

1

Client Sample ID: 011-04-MP-05N-S-38'-Q2

Lab Sample ID:

F12178-6

Matrix:

SO - Soil

Date Sampled: 01/30/02

Date Received: 01/31/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 91.9

#### **General Chemistry**

Analyte	Result () RL	Units	DF	Analyzed By	Method
Solids, Percent	91.9	%	1	02/01/02 YA	EPA 160.3 M
	<1100 🗱 1100	mg/kg	1	02/13/02 ANJ	CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-05N-S-66'-Q2

Lab Sample ID:

F12178-7

Matrix:

SO - Soil

Date Sampled: 01/30/02

Date Received: 01/31/02

Percent Solids: 92.2

Project:

Analyte

NAS Whiting Field CTO-0011

**General Chemistry** 

Result 🔾

RL

DF

1

Analyzed By

Method

Solids, Percent

Total Organic Carbon

92.2

<1100 **U** 1100

mg/kg

Units

02/01/02 YA 02/13/02 ANJ

EPA 160.3 M CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-18'-Q2

Lab Sample ID:

F12178-8

Matrix:

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: 89.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyzed By Method Result QRLUnits DF Analyte

Solids, Percent Total Organic Carbon 89.8 <1100 U

mg/kg

1 1

02/01/02 YA EPA 160.3 M

02/13/02 ANJ CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-43'-Q2

Lab Sample ID: Matrix:

F12178-9

SO - Soil

Date Sampled: 01/30/02 Date Received: 01/31/02

Percent Solids: 89.0

Project:

NAS Whiting Field CTO-0011

General Chemistry

Analyte	Result $\widehat{Q}$ RL	Units	DF	Analyzed By	Method
Solids, Percent Total Organic Carbon	89	%	1	02/01/02 YA	EPA 160.3 M
	<1100 <b>U</b> 1100	mg/kg	1	02/13/02 ANJ	CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-72'-Q2

Lab Sample ID:

F12221-2

Matrix:

SO - Soil

**Date Sampled:** 02/04/02

Date Received: 02/05/02

Percent Solids: 93.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By Result (2) DF RLUnits Analyte

Solids, Percent

<1100 (1 1100 Total Organic Carbon

%

1 1 mg/kg

02/06/02 YA

EPA 160.3 M

02/14/02 ANJ CORP ENG 81M/SW9060M

como G/28/02

Client Sample ID: 011-04-BKGD-S-22'-Q2

Lab Sample ID: Matrix:

F12221-3

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 94.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By DF Result (2) RLUnits Analyte

02/06/02 YA EPA 160.3 M 1 % Solids, Percent

02/14/02 ANJ CORP ENG 81M/SW9060M 1 1100 mg/kg <1100 Total Organic Carbon

mmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-BKGD-S-43'-Q2

Lab Sample ID: Matrix:

F12221-4

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.3

Project:

NAS Whiting Field CTO-0011

General Chemistry

**Analyte** 

Result 🔾

RL

Units

DF

Analyzed By

Method

Solids, Percent Total Organic Carbon <1200

1200

mg/kg

1 1 02/06/02 YA 02/14/02 ANJ EPA 160.3 M CORP ENG 81M/SW9060M

cma 6/28/02

Client Sample ID: 011-04-BKGD-S-72'-Q2

Lab Sample ID: Matrix:

F12221-5

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02 Percent Solids: 93.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By DF Result Q RLUnits Analyte

EPA 160.3 M 02/06/02 YA 1 Solids, Percent

93.4 <1100 **()** 1100 02/14/02 ANJ CORP ENG 81M/SW9060M 1 mg/kg Total Organic Carbon

0mmo 6/28/02

Client Sample ID: 011-04-MP-20S-S-18'-Q2

Lab Sample ID:

F12221-6

Matrix:

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 85.7

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte

Result () RL

Units

%

DF

Analyzed By

EPA 160.3 M

Method

Solids, Percent Total Organic Carbon

<1200

1 1 mg/kg

02/06/02 YA 02/14/02 ANJ

CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-20S-S-43'-Q2

Lab Sample ID: Matrix:

F12221-7

SO - Soil

Date Sampled: 02/04/02

Date Received: 02/05/02

Percent Solids: 92.0

Project:

Analyte

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By Units DF Result (2)  $\mathbf{RL}$ 

EPA 160.3 M 02/06/02 YA 1 % Solids, Percent

CORP ENG 81M/SW9060M 02/14/02 ANJ mg/kg -1 Total Organic Carbon

amo 6/28/02

Client Sample ID: 011-04-MP-20S-S-72'-Q2

Lab Sample ID: Matrix:

F12221-8 SO - Soil

Date Sampled: 02/04/02 Date Received: 02/05/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 94.4

General Chemistry

Method Analyzed By DF Units  $\mathbf{RL}$ Result Analyte 02/06/02 YA EPA 160.3 M 1 94.4 Solids, Percent CORP ENG 81M/SW9060M 02/14/02 ANJ 1 mg/kg Total Organic Carbon

Client Sample ID: 011-04-MP-20S-S-100'-Q2

Lab Sample ID: Matrix:

F12221-9

SO - Soil

Date Sampled: 02/04/02 Date Received: 02/05/02

Percent Solids: 92.0

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result $\angle$ RL	Units	DF	Analyzed By	Method
Solids, Percent Total Organic Carbon	9 <b>2</b>	%	1	02/06/02 YA	EPA 160.3 M
	<1100 🚺 1100	mg/kg	1	02/14/02 ANJ	CORP ENG 81M/SW9060M

amo 6/28/02

Client Sample ID: 011-04-BKGD-S-22'-Q3

Lab Sample ID: Matrix: F13055-2

SO - Soil

Date Sampled: 04/29/02 Date Received: 05/01/02 Percent Solids: 89.6

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Result Units DF Analyzed By Method

Solids, Percent 89.6 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 \ 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

CMO 6/28/02

Client Sample ID: 011-04-BKGD-S-43'-Q3

F13055-3 Lab Sample ID:

Matrix:

SO - Soil

Date Sampled: 04/29/02 Date Received: 05/01/02

Percent Solids: 94.4

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result () RL Analyzed By Method Units DF Analyte

05/03/02 LL EPA 160.3 M % 1 94.4 Solids, Percent

1100 CORP ENG 81M/SW9060M 05/10/02 ANJ 1 mg/kg Total Organic Carbon <1100 ()

Client Sample ID: 011-04-BKGD-S-72'-Q3

Lab Sample ID: Matrix:

F13055-4

SO - Soil

**Date Sampled:** 04/29/02

Date Received: 05/01/02

Percent Solids: 93.1

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result (V Method Analyzed By Units DF RL **Analyte** 

05/03/02 LL EPA 160.3 M 1 Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M mg/kg Total Organic Carbon

Client Sample ID: 011-04-MP-30E-S-18'-Q3

Lab Sample ID:

F13055-5

Matrix:

SO - Soil

Date Sampled: 04/29/02

Date Received: 05/01/02

Percent Solids: 87.6

Project:

**Analyte** 

NAS Whiting Field CTO-0011

General Chemistry

Method RL Units DF Analyzed By

05/03/02 LL EPA 160.3 M % 1 Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M <1100 [ 1100 mg/kg **Total Organic Carbon** 

cma 6/28/02

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID: Matrix:

F13055-6

SO - Soil

**Date Sampled:** 04/29/02 Date Received: 05/01/02

Percent Solids: 93.9

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte	Result & RL	Units DF	Analyzed By	Method
Solids, Percent	93.9	% 1	05/03/02 LL	EPA 160.3 M
Total Organic Carbon	<1100 U 1100	mg/kg 1	05/10/02 ANJ	CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID: F13055-9
Matrix: SO - Soil

Date Sampled: 04/30/02
Date Received: 05/01/02
Percent Solids: 93.7

Project: NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By DF  $\mathbf{RL}$ Units Result 🔾 Analyte 05/03/02 LL EPA 160.3 M % 1 Solids, Percent 05/10/02 ANJ CORP ENG 81M/SW9060M 1100 mg/kg 1 <1100 Total Organic Carbon

cmo6/20/ac

Client Sample ID: 011-04-MP-FD1-S-100'-Q3

Lab Sample ID: F13055-10
Matrix: SO - Soil

Date Sampled: 04/30/02 Date Received: 05/01/02 Percent Solids: 91.3

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Q RL Units DF Analyzed By Method

Solids, Percent 91.3 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 U 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

Client Sample ID: 011-04-MP-05N-S-18'-Q3

Lab Sample ID:

F13055-11

Matrix:

SO - Soil

Date Sampled: 04/30/02

Date Received: 05/01/02

Project:

NAS Whiting Field CTO-0011

Percent Solids: 87.6

**General Chemistry** 

Method **Analyzed By** DF Result RL Units Analyte

05/03/02 LL EPA 160.3 M Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 **Total Organic Carbon** 

mo color

Client Sample ID: 011-04-MP-05N-S-38'-Q3

Lab Sample ID:

F13055-12

SO - Soil

Date Sampled: 04/30/02

Date Received:

05/01/02

Percent Solids: 90.4

Project:

**Analyte** 

Matrix:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method DF Analyzed By Units

EPA 160.3 M 05/03/02 LL % 1 Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 Total Organic Carbon

CMD 6/28/02

Client Sample ID: 011-04-MP-05N-S-66'-Q3

Lab Sample ID: F13055-13

Matrix:

SO - Soil

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 90.5

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Q RL Units DF Analyzed By Method

Solids, Percent 90:5 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

cma 6/28/02

Client Sample ID: 011-04-MP-10W-S-18'-Q3

Lab Sample ID: F13055-14

Matrix:

SO - Soil

**Date Sampled:** 04/30/02

Date Received: 05/01/02

Percent Solids: 89.0

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Result ( Units DF Analyzed By Method Analyte

% 1 05/03/02 LL EPA 160.3 M Solids, Percent

05/10/02 ANJ CORP ENG 81M/SW9060M 1 <1100 mg/kg Total Organic Carbon

Page 1 of 1

Client Sample ID: 011-04-MP-10W-S-43'-Q3

Lab Sample ID: Matrix: F13055-15

SO - Soil

**Date Sampled:** 04/30/02 **Date Received:** 05/01/02

Percent Solids: 94.0

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte Result Q RL Units DF Analyzed By Method

Solids, Percent 94 % 1 05/03/02 LL EPA 160.3 M

Total Organic Carbon <1100 U 1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M

mmo 6/28/02

Client Sample ID: 011-04-MP-10W-S-72'-Q3

Lab Sample ID: Matrix:

F13055-16

SO - Soil

**Date Sampled:** 04/30/02 Date Received: 05/01/02

Percent Solids: 92.2

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Method Analyzed By Result Q RL Units DF Analyte Solids, Percent % 1 05/03/02 LL EPA 160.3 M

<1100 mg/kg 1 05/10/02 ANJ CORP ENG 81M/SW9060M Total Organic Carbon

0mo 6/28/62

Client Sample ID: 011-04-MP-FD2-S-100'-Q3

Lab Sample ID: Matrix:

F13055-17

SO - Soil

Date Sampled: 04/30/02

Date Received: 05/01/02 Percent Solids: 89.3

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Analyte

Result

RL Units DF

Method Analyzed By

Solids, Percent Total Organic Carbon

89.3 <1100

1 mg/kg

05/03/02 LL 05/10/02 ANJ

EPA 160.3 M CORP ENG 81M/SW9060M

cmo 6/28/02

Client Sample ID: 011-04-MP-20S-S-18'-Q3

Lab Sample ID: Matrix:

F13066-2

SO - Soil

Date Sampled: 05/01/02

Date Received: 05/02/02

Percent Solids: 87.8

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

Q RL Method DF Analyzed By Units Analyte Result

EPA 160.3 M 05/03/02 LL 87.8 % Solids, Percent

CORP ENG 81M/SW9060M 05/13/02 ANJ 1100 mg/kg 1 **Total Organic Carbon** <1100

cmo 6/28/02

Page 1 of 1

Client Sample ID: 011-04-MP-30E-S-43'-Q3

Lab Sample ID:

F13066-3

SO - Soil

**Date Sampled:** 05/01/02

Date Received: 05/02/02

Project:

Analyte

Matrix:

NAS Whiting Field CTO-0011

Percent Solids: 91.1

**General Chemistry** 

Result ( RL Units DF Analyzed By Method

Solids, Percent 91.1 05/03/02 LL 1 **EPA 160.3 M** 

**Total Organic Carbon** <1100 1100 mg/kg 1 05/13/02 ANJ CORP ENG 81M/SW9060M

como colestas

Client Sample ID: 011-04-MP-30E-S-72'-Q3

Lab Sample ID: Matrix:

F13066-4

SO - Soil

**Date Sampled:** 05/01/02

Date Received: 05/02/02 Percent Solids: 93.2

Project:

NAS Whiting Field CTO-0011

**General Chemistry** 

**Analyzed By** Method Units DF **Analyte** 05/03/02 LL 1 EPA 160.3 M Solids, Percent 05/13/02 ANJ CORP ENG 81M/SW9060M mg/kg 1 **Total Organic Carbon** 

cmo 6/28/02

**Chain of Custody Forms** 

Š		COC NO.
į.	AND LABOR LAW STREET,	
ik:	Terrain (778) 404-0152	1611/00
T <sub>Q</sub>	FINE (770) 604-6282	70-00TTCT
		The second secon

2007	The remain on appendix				1	(				G /X	- 1		-6		_	, COC NUMBER:	
	Tathir (778) 604-0182		,	CHA		קֿ	ר ב	Š		UX K	ر با	Š	3	CHAIN-OF-CESTODY RECORD	H	151168-020501-01	01-01
	PROJECT NUMBER:	3	LABITALE NOED CONTACT	TACE		=	FAX AN BCIPIEN	D MAE	15 FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	OD TO::		3	RECEPTEN	"RECIPIENT ! (Address, Tel No., and Fax No.):	o. , and Pax N	ic.):	
Field	151168	18	Leadest Laberal		ad Rd., Suite		Amy T	witty,	Amy Twitty, CH2M Hill, Inc.	ll, Inc.			766 Sea (ax) 850	1766 Sea Lark Lane, N (fax) 850-939-0035	avarre, F	1766 Ses Lark Lanc, Navarre, FL 32566 (phone) 850-939-8300, (fax) 850-939-0035	30-939- <del>8</del> 300,
SITETASK	CTO OR DO NUMBER:	3	LAD SO NUMBER:	ì		= 64	FAXAN	7.70 E	13 FAX AND TAKE, REPORTS/REDO TO:: RECIPIERT 2 Office and Company)	50 TO:		3	RECIPIEN	"RECIPIENT 2 (Address, Tel No., and Fex No.):	o., and Pax N	io.):	
	CTOMB	SUE O	8			-	Christ Inc.		rome, CE	Housome, CH2M Hill, Constructors,	nestruc		15 Perfi	115 Perimeter Center Place, NE, Suite 7. Phone=770-604-9182 Fax=770-604-9181	lace, NE,	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346	Ga. 30346
	PROJECT TRE, NO AND FAX NO:	3	LAR THE NO AND FAX NO.	K NO:		2 6	FAXA	D MAIL	PAX AND MAIL REPORTS/RDD TO:: RECIPIENT 3 (Name and Company)	. 20 JG:		<u> </u>	RECIPIEN	*RECIPIENT 3 (Address, Tel No., and Fax No.):	o and Fax N	ło.);	
	850-939-8300 ext. 17	Ī	67-62-6700				atlens	Roma	nov & Bo	nny Hogue,	CHIZ	H	15 Peri	neter Center ]	lace, NE,	Tatiana Romanov & Bonny Hogue, CH2M Hill 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346	Ga. 30346
						Ť	onstr	Constructors Inc.	DC.			*	hone	Phone=770-604-9182 Fax=770.604.9181	ex=770.6	04.9181	
						_		۲ <b>۷</b> ۾	ALYSES RE	MANAL YSES REQUIRED (Include Method Numbers)	e Method	Numbers)					
MPLB IDENTIFIER	B SAMPLE DESCRIPTIONLOCATION	Makes Advocated.	DATE <b>COL</b> LECTED	TIME COLLECTED	(see codes on 2OP)  DATA PKG LEVEL	(celendar days)	BLEX PÀ 2002/8051B	PAIL by 2010	TRPH by FL-PRO PAH-(1916),	TRPH(T-PRO), TOC(966)		-		<sup>26</sup> SANPLE TYPE (see codes on SOP)		<sup>27</sup> COMMENTS/ SCREENING READINGS	<sup>28</sup> LAB ID (for lab's use)
REEB-W-03-Q3	Pre Equipment Rinsate Blank	M	<b>107000</b>	00:6	۵	14	0		1					EB	Ont	Out of VOA HCls, 2 en. 1-liter	
-MP-208-S-18'-Q3	2 04-MP-20S @ 18 foot depth	70	<b>05</b> /01/02	9:10	ပ	7	3			1				Z	3ca. S	3ca. Syringe, 1 ca. 8-0z.	
AP-30E-S-43'-Q3	-MP-30E-S-43'-Q3P 04-MP-30E @ 43 foot depth	3	5 <b>85/</b> 01/02	9:40	C	12	3		1					z	3ea. S	3ea. Syringe, 1 ea. 8-oz.	
AP-30E-S-72'-Q3	-MP-30E-S-72'-Q3 04-MP-30E @ 72 foot depth	Ť	50/10/5	12:35	۵	14	6							Z	3ea. S	3ea. Syringe, 1 ea. 8-oz.	* 17.
1-POSTEB-W-01-15	Post Equipment Rinsate Blank	À	<b>60</b> 01/02	13:00	သ	14	3		1					EB	3eg. 4	3ea. 40ml VOAs, 2 ea. 1- liter	·
-TRIPB-W-01-Q3	V Trip Blank	R	401/02	XXXXX	ပ	14	7							ET.	26	2es. 40ml VOAs	
		1															
•																	
	1								-1								

ID COMPANY: (please place)	* COURIER AND SHIPPING NUMBER:		M SAMPLES TEMPERATURE AND C	" SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for labs use):	
en, CH2M Hill Comstructors, Inc.	Fed-Ex Airbill'No. 82853	502484503			
PET INQUISHED BY	DATB	TIME	* RECEIVED BY	DATE	TIME
grature; 4.		Pri	Printed Name and Signature:		
wall my	05/01/2002	1800	1800 MINHOR GHWFAI Mondages	-20/0/5	943
Propries:		æ	Printed Name and Signeture:		
		,			
gathre;		Pri	Printed Name and Signature:		
Distribution: [   Origin	Distribution: [   Original - Laboratory (To be returned with Analytical Re	coort), f 1 Copy	alytical Report); [ 1 Copy 1 - Project File; [ 1 Cherr 2 - PM/)	Brown MOINNI B NEWN	s

CH2MHILL Constructors, Inc.	Alberta, GA MGAG-1278 Thi Noc (TTD) BOL-1162 Fatt Noc (TTD) 004-2023			CHA	Z	Ģ	Ç	SO	HAIN-OF-CUSTODY RECORD	Y RE	$\mathcal{Z}$	)RD			. COC NUMBER.	30-02
NAMES	* РВОЛЕСТ НОМВВЯ	Na.	LAB NAME AND CONTACT:	TACT:		= 0	PAX AN	MAIL RE	1 PAX AND MAIL REPORTS/BDD TO:: RECIPIENT 1 (Name and Contrains)	ö		"RECD	ENT I	"RECIPIENT I (Address, Tol No., and Fax No.)	od Fax No.):	
biting Fleid	151168	Accut C-15	Accutest Labs, 4405 Vineland Rd., Suite C-15, Orlando, FL 32571	32571	Rd., St	1	) L	vitty, C	Amy Twitty, CH2M Hill, Inc.	nc.		1766 (fax)	1766 Sen Lark Lan (fax) 850-939-0035	rk Lane, Nava 9-0035	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 856-939-0035	-939-8300,
. PHASE/SITE/TASK.	CTO OR DO NUMBER:	LAB P	LAB PO NUMBER:			= =	PAXAN	NAL R	PAX AND MAIL REPORTS/RDD TO::	ö		" RECT	ENT 2	"RECIPIENT 2 (Address, Tel No., and Fax No.):	nd Pax No.):	
	CTO-0011	PO 2379	67.9			0 3	Christel Inc.	le News	Christelle Newsome, CH2M Hill, Constructors, Inc.	( Hill, Cons	ructor	1	erimet =770	115 Perimeter Center Place, NE, Sulte 7 Phone=770-604-9182 Fax=770.604.9181	115 Perimeter Center Place, NE, Sulte 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	Gą. 30346
	PROJECT TEL NO AND PAX NO:	<b>1 1 1 1 1 1 1 1 1 1</b>	LAB TEL NO AND FAX NO:	X NO:		2 2	AXAN	D MAIL R	PAX AND MAIL REPORTS/EDD TO:	ö		"RECI	ENT 3	RECIPIENT 3 (Address, Tel No., and Fax No.):	od Pax No.);	
Alth	850-939-8300 ext. 17	4074	407-425-6700			1 0	utlana	Tatiana Romanov Constructors Inc.	Tutians Romanov & Bonny Hogue, CH2M Hill Constructors Inc.	Hogue, Cl	ISM H		erimet 170	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9181	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9181	Ga. 30346
						H		ANA S	28 ANAL YSES REQUIRED (Include Method Numbers)	RED (Include M	ethod Nu	ibers)				
" sakipus idelymenin	<sup>B</sup> SAMPLE DESCRIPTION/LOCATION	YNKTRIX (908 on sabos ses)	upATE COLLECTED	COLLECTED  COLLECTED	TATA PKG LEVEL (see codes on SOP)	(cejenqei qela) <sub>Sv</sub> LVL	BLEX P-20328031B	OR4-13 vd H9AT	PAH-(8319), TRPH(FL-PRO), TOC(9669)					* SAMPLE TYPE (see codes on SOP)	⊅ comments/ screening readings	.* LAB ID (for lab's use)
11-04-MP-05N-S-18'-Q3	04-MP-05N @ 18 levt depth	20	04/30/02	10:40	۲	7	20		1					N	3cs. Syringe, 1 es. 8-oz.	
11-04-MP-05N-S-18'-Q3 MS	11-14-MP-05N-8-18'-Q3 04-MP-05N @ 18 foot depth - MS	20	04/30/02	10:40	υ	2	6		-					MS	3es. Syrings, 1 en. 8-oz.	
11-04-MR-05N-5-18'-Q3 MSD	04-MP-08N @ 18 foot depth -	20	04/30/02	10:40	υ	7			-					СВ	3es. Syrings, 1 es. 8-0z.	
11-04-MP-05N-S-38'-Q3	04-MP-05N @ 38 foot depth	<b>2</b> 2	04/30/02	11:20	၁	<u> </u>	ε.		1					ĸ	3es. Syringe, 1 ea. 8-0z.	
11-04-MP-05N-S-66'-Q3	11-04-MP-05N-S-46'-Q3 04-MP-05N @ 66 foot depth	S	04/30/02	12:20	ບ	41	to		1					N	3ca. Syringe, 1 ea. 8-02.	
011-04-MP-10W-\$-18'- Q3	04-MP-10W @ 18 foot depth	20	04/30/02	14:20	ນ	3	100		11					Z	3ea. Syringe, 1 ea. 8-02.	
011-04-MP-10W-5-43'- Q3	04-MP-10W @ 43 foot depth	ν.	04/30/02	14:50	ນ	7	60		7					N	3ea. Syringe, 1 en. 8-02	
011-04-MP-10W-\$-72'- Q3	04-MP-10W @ 72 fout depth	Ø	04/30/02	15:50	ບ	77	3		77					N	3cs. Syringe, 1 es. 8-0z.	
011-04-MP-PD2-S-100". Q3	04-NY-FD2 @ 100 foot depth	22	04/30/02	XXXX	υ	7	т.		1					EDS	3ea. Syringe, 1 en. 8-02.	
011-04-POSTEB-W-01- Q3	Post Equipment Rinsate Blank	<b>≱</b>	04/30/02	17:35	၁	14	ń	1 1						EB	3ea, 40ml VOAs, 2 ea. 1- liter	
IR(S) AND COMPANY: (please min) (CEliveen, CH2M Hill Constructors, Inc.	ing instructors, Inc.	ndo.	COURIER AND SHIPPING NI		R535494214	1214					*	AMPLES TO	MPERA	TURE AND COND	* SAMPLES TEMPERATURE AND CONDITION UPON RECEIFT (for lab's uso)	;;
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475	151168-020430-01	"RECIPIENT 1 (Address, Tel No. , and Pax No.):	1766 See Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	* RECIPIENT 2 (Address, Tel No. , and Fax No.);	113 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Pbone=770-604-9182 Fax=770.604.9181	" RECIPIENT 3 (Address, Tel No., and Pax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga, 30346 Phone#770-604-9182 Fax=770.604.9181	
Judopan Machory a	CHAIN-OF-CUSIODY RECORD 151168-020430-01	II PAX AND MALL REPORTS/EDD TO:: RECIPIENT 1 (Name and Combany)	Inc	<sup>13</sup> PAX AND MALL REPORTINGDO TO:: RECIPIENT 2 (Nerse and Company)	M Hill, Constructors,	19 FAX AND MAIL REPORTERED TO:: 14 RECIPIENT 3 RECIPIENT 3 (Name and Company)	Tatians Romanov & Bonny Hogue, CH2M Hill 115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Constructors Inc.	24 ANAL YSES RECUIRED (Include Method Numbers)
C 144 1 147	CHAIN-O	*LAB NAME AND CONTACT:	Accutest Labs, 4405 Vineland Rd., Suite C-15, Orlando, FL 32571	LAB PO NUMBER:	PO 2379	<sup>2</sup> LAB TEL NO AND FAX NO:	407-425-6700	
Atlanta, GA 30346-1278	The Abs: (770) 604-6182 Fee Abs: (770) 604-6282	PROJECT NUMBER:	151168	CTO OR DO NUMBER.	CTO-0011	PROJECT TEL NO AND FAX NO:	850-939-8360 ext. 17	
	Sobstitution of the	NAME:	liting Field	PHASE/SITE/TASK:			itty	

*LAB ID	(for labra use)										
st COMMAND	SD2	3ea, 40ml VOAs, 2 ca. 1- liter	3ea. Syringa, 1 cs. 8-oz.	Зея. Syringe, 1 ea. 8-oz.	3ea, Syringe, 1 ea. 8-02.	3ea. Syringe, 1 ea. 8-oz.	3ea. Syringe, 1 ea. 8-oz.	3ea. 40ml VOAs, 2 ea. 1- liter	3ea. 40ml VOAs, 2 ea. 1- liter	3ea. Syringe, 1 ea. 8-0z.	3ea. Syringe, 1 ca. 8-oz.
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3OP)	ETAM <sup>es</sup> Er saben sae)	≩	တ	ος:	, S	20	9/2	≩	*	92	203
	* SAMPLE DESCRUPTION/LOCATION	11-04-PREEB-W-01-Q3 Pre Equipment Rinsate Blank	Background Location @ 22 foot depth	Background Location @ 43 foot depth	Background Location @ 72 foot depth	04-MP-3	04-MP-30E @ 43 foot depth	Post Equipment Rinsste Blank	1104-PRREB-W-02-Q3 Pro Equipment Rinsnte Blank	111-04 MP-30E-8-72'-Q3 04-MP-30E @ 72 foot depth	04-MP-FD1 @ 100 foot depth
	<sup>18</sup> Sample identifier	11-04-PREEB-W-01-Q3	311-64-BKGD-8-22'-Q3	011-04-BKGD-8-43'-Q3	011-64-BKGD-S-72'-Q3	11-04-MP-30E-S-18'-Q3	11-04-MP-30E-8-43'-Q3	011-04-POSTEB-W-01- O3	111-04-PREEB-W-02-Q3	111-04-MP-30E-8-72'-Q3	011-04-MP-FD1-S-100'- Q3

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une and Signature:			Printed Name and Signetare:			
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	CH2MHILL.	Abenta, CA 30346-1278 TRINC: (TT) 606-0192 As as - 77M SAL 0340			CHAD	Ż	Ō	١	2	4-OF-COSTODI NECON	<b>4</b>	五 う	5	}		-	151168-	151168-020430-03
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The control of the	PHASE/STIE/TASK:	CTO OR DO NUMBER	LABR	) NÜMBER:			12 5	AX AND	MALK	EPORTS/EDD TO			1	RECPIE	II 2 (Address,	Tel No. , un	d Pac No.):	
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1		PROTECT THE NO AND FAX NO.	3	BE NO AND FA	XNO		12.5	TAX AND	XAE K	BRORTS/EDD TO			-	XBCPE	YT 3 (Address,	Tel No., m	d Pax No.);	
# MALTON Death Association	irty	850-939-8300 ext. 17	407.45	15-6700			# D	atiana	form In	or & Bouny I	logue,	CH2M	CHIII 1	15 Peri 182 Fe	mater Cent r=770,604.	ter Piace, 9181	, NE, Suite 700, Atlanta,	, Ga. 30346 Phone=770-60
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ER:	025-02		850-939=8300	).	1a, Ga.		ita, Ga. 30346		<sup>21</sup> LAB ID (for lab's use)					-				b's use):	TIME		1	( <b>6</b> , <b>6</b> )	
, COC NUMBER	151168-011025-02	und Fax No.):	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-93938300, (fax) 850-939-0035	and Fax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 20346 Phone-770-604-9182 Fax-770-604.9282	and Fax No.):	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone=770-604-9182 Fax=770.604.9282		<sup>J7</sup> COMMENTS/ SCREENING READINGS	3ea. Encore & 2 ea. 8- 0z.	3ea. Encore & 2 ea. 8- 0z.	3ea. Encore & 2 ea. 8- 0z.	3ea. Encore & 2 ea. 8- 0z.	3ea. 40ml VOAs, 3 ea. 1 liter.,				<sup>31</sup> SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT (for lab's use)	DATE			10/53/01	
• •		" RECIPIENT 1 (Address, Tel No., and Fax No.):	ark Lane, Nava 39-0035	<sup>5</sup> RECIPIENT 2 (Address, Tel No. , and Fax No.):	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9282	* RECIPIENT 3 (Address, Tel No., and Fax No.).	115 Perimeter Center Place, NE, Suite 7 Phone=770-604-9182 Fax=770.604.9282		28 SAMPLE TYPE (see codes on SOP)	z	Z	Z	z	ОС				RATURE AND CONT					
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	HAIN-OF-CUSIODY RECORD	11 FAX AND MAIL CD of COC, Receipt Report, Preliminary data, & EDD TO::			11		Tatiana Romanov, CH2M Hill Constructors Inc.	25 ANALYSES REQUIRED (Include Method Numbers)	& TOC by 9068									18 T	RECEIVED BY		¥		
	)DX	C, Receipt Rep	Amy Twitty, CH2M Hill, Inc.	<sup>12</sup> FAX AND MAIL Preliminary Report TO:: PROPIEM 2 (Name and Company)	Christelle Newsome, CH2M Hill, Constructors, Inc.	FAX AND MAIL REPORTS/BDD TO:	H2M Hill	REQUIRED (I	PAHS by 8316, TRPH by FL-PRO,	7	7	2	2									(F)	
		OD of CO	CH2M	Prelimina and Cor	some, Inc.	REPORT	10v, C	ALYSES	TRPH By FL-PRO,			<u> </u>		-						Signature	Signal Co	Signature	
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(	ب ج	FAX AN	Amy T	12 FAX AND MAIL Preliminary Repair Preliminary Repair Preliminary Company	Christelle Newson Constructors, Inc.	FAX AND MAIL REPORTS/EDE	Tatiana Inc.		11EX PÅ 2032/8051B	m	3	8	9	6						Printed Name and Signature:	Printed	Printed Name	
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	CHA	TACT	Accutest Laboratory, 4405 Vineland RD, C-15, Orlando, Fl. 32811			X NO:			TIME COLLECTED	1105		1 00	850	1415				PPING NUMBER.		11)	1019		
		LAB NAME AND CONTACT:	Accutest Laboratory, 440 C-15, Orlando, Fl. 32811	LAB PO NUMBER:	92	" LAB TEL NO AND FAX NO:	407-425-6700		n DATE	10/26/01	10/26/01	10/26/01	10/26/01	10/26/01				"COURIER AND SHIPPING Fed-Ex Airbill No.	DATE		2/0/		
		LABN	Accute C-15, (	LABPO	PO 2379	LABT	407-42		XINTAM <sup>ec</sup> (9O2 aro enbox 59e)	S	S	S	S	3				Fed-I	1	$\coprod$	$\square$		
115 Perimeter Center Place, Suite 700	Tel No: (770) 604-9182 Fax No: (770) 604-9282	Ī	151168	*CTO OR DO NUMBER:	CTO-0011	PROJECT TEL NO AND FAX NO:	850-939-8300 ext. 17		* SAMPLE DESCRIPTION/LOCATION	04-MP-20S @18 foot depth	04-MP-20S @43 foot depth	04-MP-20S @72 foot depth	04-MP-10W @72 foot depth	POST Equipment Rinsate Rlank				rint)	IGUEN BV	M M	Myn 100		
	H2MHILL Constructors lie	~_	g Field	SE/SITE/TASK: "C	0	tract:			SAMPLE IDENTIFIER	04-MP-20S-S-18-Q1	04-MP-20S-S-43-Q1	04-MP-20S-S-72-Q1	34-MP-10W-S-72-Q1		; >			i) AND COMPANY: (please print) y, CH2M Hill, Inc.	W PRI INDITISHED BY	nd Signature:	in Kitchely		

	115 Perimeter Center Place, Suite 700 Attente CA 30344,1278										7.7		1			COC NUMBER	ند
Constructors, Inc.				CHA		Ş	ب <u>خ</u>	$\tilde{\Xi}$			IAIN-OF-CUSTODY KECOKD	0	K			151168-011025-01	25-01
,;;i	PROJEC	3	LAB NAME AND CONTACT:	TACT:		-	FAXAN	D WALL	CDof	OC, Rec	"I FAX AND MAIL CD of COC, Receipt Report, Preliminary data, PRDD TO:	ninary data,		PIENT I	18 RECIPIENT ! (Address, Tel No. , and Fax No.)	and Fax No.):	
Field	151168	Accu C-15,	Accutest Laboratory, 440 C-15, Orlando, Fl. 32811	ory, 4405 Vi.	5 Vineland RD,		Amy Twitty, CH2M Hill, Inc.	witty,	CH2	A HIII,	Inc.			Sea Ls 850-93	1766 Sea Lark Lane, Nav (fax) 850-939-0035	1766 Sea Lark Lane, Navarre, FL. 32566 (phone) 850-939-8300, (fax) 850-939-0035	150-939-8300,
E/SITE/TASK:	CTO OR DO NUMBER:	3	LAB PO NUMBER:			= ~	FAXAN	D MAIL	L Prelimit me and C	ompany)	13 FAX AND MAIL Preliminary Report TO:: RECIPIENT 2 (Name and Company)		15 RECI	PIENT 2	SECIPIENT 2 (Address, Tel No., and Fax No.):	and Fax No.):	
	CTO-0011	PO 2379	379				Christelle Newson Constructors, Inc.	lle Ner	wsome , Inc.	, СН2	M Hill,		115 P Phone	erimet <del></del> 770-	er Center Place 604-9182 Fax	115 Perimeter Center Place, NE, Sulte 700, Atlanta, Ga. 30346 Phone-770-604-9182 Fax-770.604.9282	1, Ga. <b>GG</b> 346
ACT:	PROJECT TEL NO AND FAX NO:		"LAB TEL NO AND FAX NO:	XX NO:		<u> </u>	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	ID MAIL	L REPOR	(TS/EDD	. TO::		" RECI	PIENT 3	RECIPIENT 3 (Address, Tel No., and Fax No.)	and Fax No.):	)(
	850-939-8300 ext. 17	407-7	407-425-6700				Tatiana Inc.	Кош	anov,	CH2M	Tatiana Romanov, CH2M Hill Constructors Inc.	uctors	115 P Phon	erime	er Center Pla 604-9182 Fax	115 Perimeter Center Place, NE, Sulte 700, Atlanta, Ga. 10346 Phone=770-604-9182 Fax=770.604,9282	
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t-TRIPB-W-03-Q1	Trip Blank	≱	10/25/01	14:25	ပ	41	и		<u> </u>						၁၀	2ea. 40mi VOAs	
-PREEB-W-03-Q1	Pre Equipment Rinsate Blank	≱	10/22/01	14:40	U	7	3	7	-	_					ي کو	3ea. 40ml VOAs, 3 ea. 1-	
4-MP-5N-S-66'-Q1	04-MP-5N @ 66 foot depth	Ø	10/25/01	17:20	ပ	4	6	-			2				Z	3ea. Encore & 2 ea. 8- 0z.	
-:MP-10W-S-18-Q1	04-MP-10W @18 foot depth	S	10/22/01	17:50	ပ	4	ы				7				Z	3ea. Encore & 2 ea. 8- 0z.	
I-MP-10W-S-43-Q1	04-MP-10W @43 foot depth	S	10/22/01	18:30	υ	4	Е				7				Z	3ea. Encore & 2 ea. 8- 0z.	•
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ND COMPANY: (please print) r, CH2M Hill Constructors, Inc.	orint) tructors, Inc.	<u> </u>	"COURIER AND SHIPPING NUMBER. Fed-Ex Airbill No.	PING NUMBER								N SAN	PLES TE	EMPER/	TURE AND CON	<sup>JI</sup> SAMPL <u>QS TEMPERATURE AND CONDITION UPON RECEIPT (for laby use)</u>	:(əsn
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Constructors, Inc.	Tel No: (770) 604-9182 Fax No: (770) 604-9282			CHAI		5	١	2	7	J X	7	こして	3			151168-020130-01	30-01
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011-04-PREEB-W-01-Q2	Pre Equipment Rinsate Blank	≱.	01/30/02	1030		4	3 2	7						ებ ,	Зса.	3ca. 40ml VOAs, 2 ca. 1- liter	
011-04-MP-10W-S-18"- Q2	04-MP-10W @ 18 foot depth	S 01	01/30/02	三ろ	υ	4	3	-	-					'z	Зеа.	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	
011-04-MP-10W-S-43'- Q2	04-MP-10W @ 43 foot depth	S 01	01/30/02	041	U	4	3	_	-					Z,	3ca.	3ea. Encore, 1 ea. 8-02., 1 en. 4-02	
011-04-MP-10W-S-72'- Q2	04-MP-10W @ 72 foot depth	S 01	01/30/02	004	υ	4	3	-	-					Z	Зев.	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	
011-04-MP-05N-S-18'-Q2	04-MP-0SN @ 18 foot depth	S 01	01/30/02	1500	ပ	14	3 1	1	1					Ŋ	3ea.	3ea. Encore, 1 ca. 8-oz., 1 ca. 4-oz	
011-04-MP-05N-S-38'-Q2	04-MP-05N @ 38 foot depth	S 01	01/30/02	1600	၁	14	3 1	1	1					z	Зсв.	3ea. Encore, 1 ea. 8-02., 1 ea. 4-02	
011-04-MP-05N-S-66'-Q2	04-MP-05N @ 66 foot depth	S 01	01/30/02	1635	ပ	14			-					Z	3ca	3ca. Encore, 1 en. 8-02., 1 ca. 4-02	
011-04-MP-05N-S-18'-Q2 MS	04-MP-05N @ 18 foot depth	S 01	01/30/02	1500	ပ	41	3 1	1	-					MS	3ea	3ea. Encore, 1 ca. 8-02., 1 ca. 4-02	
011-04-MP-05N-S-18'-Q2 SD	04-MP-05N @ 18 foot depth	S 01	20/0E/10	1500	၁	14	3.	1 1	1					SD	3ea	3ea. Encore, 1 ea. 8-0z., 1 ea. 4-0z	æ
011-04-MP-30E-S-18'-Q2	04-MP-30E @ 18 foot depth	S 01	01/30/02	1710	၁	14	3							Z	3ea	3ea. Encore, 1 ca. 8-oz., 1 ca. 4-oz	
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113 Permeter Contor Place, Suste rou Allanta, GA 30346-1278 Tel Nex (770) 664-5982	* PROJECT NUMBER:	151168	* CTO OR DO NUMBER:	CTO-0011	PROJECT TEL NO AND FAX NO.	850-939-8300 ext. 17		"SAMPLE DESCRIPTION/LOCATION	04-MP-30E @ 43 foot depth		-84-N4#-10K @ 72 1001 depth-	Post Equipment Rinsate Blank	Trip Blank							l Print)	structors, Inc.	иѕнер ву	Min Les	Charles -				Distribution:     Original - Laboratory (To be returned with Analytical Report);     Copy I - Project File:     Copy I - PMO
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Constructors, Inc.	Tel No. (770) 604-9182			CHAIN-OF-CUSTODY RECORD	Ż	-OF	<u>[</u> -	US	[0]	DY	RE	Ç	SED IN			TOCKINABIR	
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Ą	850-939-8300 ext. 17	(813)	(813) 247-2805			<u> </u>	erten El Co	Tatiana Romanov & Hill Constructors Inc.	Tatiana Romanov & Bonny Hogue, CH2M Hill Constructors Inc.	ny Hogi	e, CH		15 Per	meter Cen	er Place	115 Perimeter Center Place, NE, Suite 700, Atlanta, Ga. 30346 Phone-770-604-9182 Fax-770.604.9181	a, Ga. 30346
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1-16-PREEB-EB-01	Pre Equipment Rinsate Blank	<b>≱</b>	05/10/02	1200	၁	3	-							EB	_	1 Amber Liter	10
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	÷	TEL: 40	ORLANDC 7-425-6700	ORLANDO, FL 32811 TEL: 407-425-6700 • FAX: 407-425-0707	25-0707		ACCUTEST QUOTE #:	*	
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CHAIN OF CUSTODY

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MATRIX CODES DW DRINKING
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LIQ OTHER SOL - OTHER SOLID LAB USE ONLY TEMPERATURE COMMENTS/REMARKS ... ANALYTICAL INFORMATION SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY ACCUTEST QUOTE #: 2. RECEIVED BY: 4. PRESERVE WHERE APPLICABLE RECEIVED BY: DATE TIME: à PRESERVATION SNON ORLANDO, FL 32811 TEL: 407-425-6700 • FAX: 407-425-0707 10521 EON HOM DATA DELIVERABLE INFORMATION STANDARD
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# CHAIN OF CUSTODY 4405 VINELAND ROAD . SUITE C-15 OPLANDO, FL 32811 TEL: 407-425-5700 · FAX: 407-425-0707

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ACCUTEST QUOTE #: ACCUTEST JOB #:

DW-DRINKING
WATER
GW-GROUND
WW-WASTE
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SO-SOL MATRIX CODES SO- SOIL SL- SLUDGE O1- OIL LIO- OTHER LIO-UND 801- OTHER SOLID TEMPERATURE 2 COMMENTS/REMARKS § 2 ANALYTICAL INFORMATION SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY 2. M PRESERVE WHERE APPLICABLE RECEIVED BY: DATE JIME: M PRESERVATION 10820 EONH HOPN DATA DELIVERABLE INFORMATION нса FACILITY INFORMATION STITTOS 2. FELINGUISHED SY: 4. RELINGUISHED BY O STANDARD
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CHAIN OF CUSTODY

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# CHAIN OF CUSTODY 405 VINELAND ROAD . SUITE C-15 OPLANDO, FL 32811 TEL: 407-425-6700 · FAX: 407-425-0707

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	TEL: 407-425-8700 • FAX: 407-425-0707	
IT INFORMATION	FACILITY INFORMATION CONTRACTOR TO THE PROPERTY OF THE PROPERT	FACILITY INFORMATION CONTRACTOR ANALYTICAL INFORMATION CONTRACTOR MATRIX CODES
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TEMPERATURE WATER GW- GROUND WATER WW- WASTE WATER SO- SOIL LAB USE ONLY SO SOIL SL SLUDGE OI OIL LIQ OTHER SOL OTHER SOL OTHER 7班/ COMMENTS/REMARKS **3**□ Na Carre PRESERVE WHENE APPLICABLE ALNIT- AL PRESERVATION DOSZI COM DATA DELIVERABLE INFORMATION HOTH НСІ ナカウオ #O# BOTTLES 2. C. NELINGUIGHED BY: 4. ā XXXIV F15055 SEAL O SAMPLED BY: におまり STANDARD
COMMERCIAL "B"
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(2) OTHER (SPECIFY) COLLECTION 1550 200 3 PROJECT NAME PROJECT NO. LOCATION Calabo DATE FAX# RECEIVED BY: 5. **ZIP** FIELD ID / POINT OF COLLECTION લં F13055-15 -APPROVED BY: DATA TURNAROUND INFORMATION DATE TIME: STATE 48 HOUR RUSH
24 HOUR EMERGENCY
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# CHAIN OF CUSTODY 4405 VINELAND ROAD • SUITE C-15 ORLANDO, FL. 32811 TEL: 407-425-8700 • FAX: 407-425-0707

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	FIELD ID / POINT OF COLLECTION	Ņ Ņ	DATE	TIME	SAMPLED BY:	ETTAM TO 1	HOM	HOSZH	MONE	)9 <u>/</u>						LAB USE ONLY	<b>&gt;</b> -
F13066	4		21.1	01:0	CHZM	क्ष	×			×	-		-	F	-		1
	١		115	1	CHIM	50 1	×			×						/ 51/2.	
	4-		۶/	19:35	CHIM	200	×			×							
											-		_				1
									F								1
							-			Ė							1
						$\vdash$	-				-			F			1
							F						-	1			1
						-									-		1
						-							<u> </u>	-			1
																	1
DATA TURNAROUND INFORMATION	ND INFORMATION			DATA DELIVERABLE INFORMATION	VERABLE	INFOR	ATION	ii.		٠.,		8	MMENT	COMMENTS/REMARKS	*K6		
STANDARD	APPROVED BY:		2	90						7	  -						i l
24 HOUR EMERGENCY				K DELIVERABLE	. "				<del></del>	2							1
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S PREVIOUSLY APPROVED	•		1						1								1
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The state of the s	OSOO - (20	RECRIVED BY:	メアン		AELINO 2.	RELINGUISHIDAN:	7		SATA TIME:	07. SS.	-	RECEIVED BY:	D				
		RECEIVED BY: 3,			MELINO 4.	WENED BY			DATE TIME	346	Ę.	necueran. 4.	<b>\</b> .				1
NOUISHED BY:	DATE TIME:	RECEIVED BY: 5.			* TV 38					PRESENT	PRESENT WHERE APPLICABLE	PPLICABL	4	\$	30	TEMPERATURE	
								İ									F

Appendix B
Data Validation Checklists

## QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Volatile Organic Analytes by GC/MS

Project File(s)	F11289, F11298, F	11333	Sampling Date(s)	10/22/02, 10/23/02, 10/26/01
Laboratory	Accutest - Orlando	FL	Receipt Date(s)	Next Day
SDG Number	F11289		Matrix	☐ Water ☐ Air
				Soil/Sediment with aqueous field QC samples
Sample Identifi	cation Numbers:	•		
F11289-01 <sup>EB</sup>	F11289-06	F11298-03	F11333-01 TB	F11333-06
F11289-02	F11289-07 <sup>EB</sup>	F11298-04	F11333-02 EB	F11333-07
F11289-03	F11289-08 <sup>TB</sup>	F11298-05	F11333-03	F11333-08
F11289-04 FD	F11298-01 <sup>TB</sup>	F11298-06	F11333-04	F11333-09
F11289-05	F11298-02 <sup>EB</sup>	F11298-07 <sup>EB</sup>	F11333-05	F11333-10 <sup>EB</sup>
Hazardou Analytica USEPA O Data Revi USEPA S USEPA S USEPA S USEPA S Other: Laboratory est: The following matrix spike / blank results.	s Waste Remedial A I Data (HAZWRAP D Contract Laboratory Priew (EPA-540/R-94/0 W846 (SW-846) Me Orinking Water (DW) Center for Environmentablished accuracy and parameters were examatrix spike duplication field, trip, and/or	Actions Program OOE/HWP-65/R2 rogram (CLP) Na 012, February 199 thods (8260) Methods (524.2, ental Excellence ( precision control amined: holding ( ate (MS/MSD) re rinsate blank re	(HAZWRAP) Req ) tional Laboratory Fu (3) 624, 1624) AFCEE) QAPP Vers limits. time and sample pro sults, laboratory cor sults, field duplica	surance were based on: uirements for Quality Control of unctional Guidelines for Organic  sion 3.0  eservation, surrogate spike results, ntrol sample (LCS) results, method te results, instrument tuning and ance, and quantitation limits.
Reviewed by:	Chin U	hlad		Date: 6/05/02
QA Concurren	ice by:			Date:

E\*Data, Inc. Volatiles by GC/MS Data Validation Checklist June 2002

## **Validation Summary**

The MS/MSD recoveries for ethylbenzene and xylene were below the lower control limit. The presence of these parameters in the primary sample may have interfered with the analyses. The results of the primary sample have been qualified as estimated and flagged "J" for ethylbenzene and xylene.
·

Validation Summary (cont.)	
	_
	_
	_
	_

**Qualifiers:**U - Not detected. R - Unusable.

J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

E\*Data, Inc. Volatile Validation Checklist June 2002

## HOLDING TIME AND SAMPLE PRESERVATION I. No Yes All samples were handled and preserved according to requirements. All samples were extracted and analyzed within holding time criteria. The following deficiencies were found: Qualifier Analysis Extraction Preservation Collection Sample ID Matrix Date Date Flag Date

Remarks:			

## II. SURROGATE SPIKE RECOVERIES

ample ID	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4
,,				1-400

		QCI	imits
Surrogate	Name	Water	Soil
SMC1 (DFM)	Dibromofluoromethane	80 – 120	75 – 125
SMC2 (TOL)	Toluene-d8	80 – 120	75 – 125
SMC3 (BFB)	p-Bromofluorobenzene	80 – 120	72 – 137
SMC4 (DCB)	1.2-dichlorobenzene-d4	80 – 120	68 – 125

Remarks:			

III.	MATRIX SPIKE/MATRIX SPIKE	DUPLICA	TE ANALY	YSIS			
Yes	Matrix Spike/Matrix Spike D MS/MSD analysis was perfor sample F11333-07 found in All recoveries and relative pe	rmed on sam SDG# <u>F113</u>	ple <u>F11<b>298</b> 33</u> .	<u>-06</u> fo	und in SDG	# <u>F11298</u>	SDG. 3 and
The follo	owing deficiencies were found:						
Matrix	Analyte	MS Recover	MSI Recove	- 1	MS/MSD QC Limits	RPD	RPD Limit
	D Summary: Unacceptable recoveriem III in data package.	es per the tota	al number o	f matri	x spike reco	veries in	the fraction.
Sample	ID <b>F11298-06</b>		Sample ID		F11333	-07	
SDG	F11298 Matrix So		SDG	F113	33	Matrix	Soil
RPD	0 out of 4 outside l	imits I	RPD .	0	out of		utside limits
Spike R	ec. 0 out of 8 outside l	imits	Spike Rec.	0	out of	<b>8</b> 00	tside limits
Remark	s:						
		,					
	Note: No action will be taken base	ed on MS/M	SD data al	one. S	amole resu	lts mav ł	e affected

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

LCS ID	Matri	ix Co	ompound		%]	1	ontrol imits	Qualifier Flags
						+		
V				·····		+		
					1			
LCS Summary	: Unaccep	ptable r	recoveries for each L	CS analysis i	n the SDG.			
	293-BS	Matr		CS analysis i	n the SDG.		Matrix:	Soil
CS ID VB	293-BS	Matr Out			VG479-BS	N Out of	Natrix:	
CS ID VB.	293-BS 0	Matr Out of 4	rix: Water  4 Outside Limits	LCS ID Spike Reco	VG479-BS very 0	Out of	4	Outside Limit
Spike Recovery  LCS ID VH	0 443-BS	Matr Out of 4 Matr	rix: Water  Outside Limits  rix: Soil	LCS ID Spike Reco	VG479-BS very 0 VB294-BS	Out of N	4 Matrix:	Outside Limit
LCS ID VB.	0 443-BS	Matr Out of 4 Matr Out of 4	rix: Water  Outside Limits  rix: Soil  Outside Limits	LCS ID Spike Reco LCS ID Spike Reco	VG479-BS very 0  VB294-BS very 0	Out of N Out of	4 Natrix: _	Outside Limit  Water  Outside Limit
CCS ID VB: Spike Recovery  LCS ID VH Spike Recovery	0 443-BS 0 482-BS	Matr Out of 4 Matr Out of 4	rix: Water  Outside Limits  rix: Soil  Outside Limits	LCS ID Spike Reco	VG479-BS very 0 VB294-BS	Out of N Out of	4 Matrix:	Outside Limit Water
CCS ID VB: Spike Recovery  LCS ID VH Spike Recovery	0 443-BS 0 482-BS	Matr Out of 4 Matr Out of 4	rix: Water  Outside Limits  rix: Soil  Outside Limits	LCS ID Spike Reco LCS ID Spike Reco	VG479-BS very 0  VB294-BS very 0  VG483-BS	Out of Out of	4 Matrix:	Outside Limit Water Outside Limit
Spike Recovery  LCS ID VH  Spike Recovery  LCS ID VG  Spike Recovery	0 443-BS 0 482-BS	Matr Out of 4 Matr Out of 4	rix: Water  Outside Limits  rix: Soil  Outside Limits  rix: Soil  Outside Limits  Outside Limits	LCS ID Spike Reco LCS ID Spike Reco LCS ID	VG479-BS very 0  VB294-BS very 0  VG483-BS	Out of Not of Out of Out	4 Matrix: 4 Matrix: 4 Matrix:	Outside Limit Water Outside Limit Soil
Spike Recovery  LCS ID VH  Spike Recovery  LCS ID VG  Spike Recovery  LCS ID VG	0 443-BS 0 482-BS 0	Matrof 4  Matrof 4  Matrof 4  Matrof 4  Matrof 5  Matrof 6  Matrof 7  Matrof	rix: Water  Outside Limits  rix: Soil  Outside Limits  rix: Soil  Outside Limits  Outside Limits	LCS ID Spike Reco LCS ID Spike Reco LCS ID Spike Reco	VG479-BS very 0  VB294-BS very 0  VG483-BS very 0	Out of Nout of Out of	4 Matrix: 4 Matrix: 4 Matrix:	Outside Limit  Water  Outside Limit  Soil  Outside Limit
Spike Recovery  LCS ID VH  Spike Recovery  LCS ID VG  Spike Recovery	0 443-BS 0 482-BS 0 304-BS	Matrof 4  Matrof 4  Matrof 4  Matrof 4  Matrof 5  Matrof 5  Matrof 5  Matrof 5	rix: Water  Outside Limits  rix: Soil  Outside Limits  rix: Soil  Outside Limits  Water  Water	LCS ID Spike Reco LCS ID Spike Reco LCS ID Spike Reco LCS ID	VG479-BS very 0  VB294-BS very 0  VG483-BS very 0	Out of Nout of Out of Out of Out	4 Matrix: 4 Matrix: 4 Matrix:	Outside Limit  Water  Outside Limit  Soil  Outside Limit

LABORATORY CONTROL SAMPLE

IV.

## V. BLANK ANALYSIS RESULTS

A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

Matrix	Compound	Conc	Action Level	Associated Samples
Water	All target parameters less than RL			
Soil	All target parameters less than RL			
Soil	All target parameters less than RL			
Water	All target parameters less than RL			
Soil	All target parameters less than RL			
Soil	All target parameters less than RL			
Water	All target parameters less than RL			
Soil	All target parameters less than RL			
	Water Soil Soil Water Soil Soil Water	Water All target parameters less than RL Soil All target parameters less than RL Soil All target parameters less than RL Water All target parameters less than RL Soil All target parameters less than RL Soil All target parameters less than RL Water All target parameters less than RL Water All target parameters less than RL	Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Water All target parameters less than RL	Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Soil All target parameters less than RL  Soil All target parameters less than RL  Water All target parameters less than RL  Water All target parameters less than RL

Remarks: All method blanks were absent target parameters at concentrations greater than the report limits.	
An mound diamage was a second larger particular and a second l	
	-
	_

ield QC asso		C samples we this SDG we		ed with t	this SDG.			
1	rip Blanks				Equipme	nt Ri	nsate Blanks	
F11289-08	гв		F11289-0	1 <sup>EB</sup>	F11333-02 <sup>1</sup>	ЕВ		
F11298-01	<del></del>		F11289-0		F11333-10 <sup>1</sup>	EB		
F11333-01			F11298-0	)2 <sup>EB</sup>				
			F11298-0	)7 <sup>EB</sup>				
					Level			
Blank ID	Matrix	Compoun	d	Conc	Action	As	sociated Samples	
					Level	-		·
	-				1	-		
						-		
				<u> </u>		1		
						1		
	<del>                                     </del>					1		
				1				
			•					

VI. FI	FIELD PRECISION RESULTS											
Yes No	Field duplicate data were included in this data package.  Qualification of field duplicate data was attempted.  Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were ≥5 x the RL.											
Note: In the	he absence of pro	ject specified cr	iteria the follov	ving guidelines a	re recommen	ded:						
	For sample results >5 x the RL, the RPD between field duplicate samples was <40% for											
	water samples (70% for soil samples).  For sample results <5 x the RL, the RPD between field duplicate samples was less than the RL for water samples (less than 2x the RL for soil samples).											
Field Sam	ple/Duplicate ID	: <u>F11289-04/-05</u>	Matrix: S	<u>oil</u>								
field duplic	ate.	ce (RPD) is calcul	-		ified in either t	he sample or						
		Field Precision E	valuation Defic	A = B =	B)/2 Sample Resul Duplicate San t:							
Analyte	RL	5 x RL	Sample Result	Duplicate Result	RPD	Action						
Benzene	2300	11500	ND	ND	NC	None						
Toluene	2300	11500	ND	118	NC	None						
Ethylbenze	ne 2300	11500	38400	15900	83%	J detects						
Xylene	6900	34500	91000	38800	80%	J detects						
Remarks:												

NC is not calculated due to concentration levels less than 5 times the RL.

m/z	Required Abundance	Actual Abundance	
			1
			_
		·	_
			1
			-
			_
<del></del>			

GC/MS TUNING - INSTRUMENT PERFORMANCE

VII.

## VIII. INITIAL AND CONTINUING CALIBRATIONS

Yes	No	
$\boxtimes$		The average relative response factors (RRF <sub>wg</sub> ) met validation criteria for all initial
		calibrations. $RF > 0.05$
$\boxtimes$		The percent relative standard deviation (%RSD) of the calibration or response factors (or
		correlation coefficients for regression analysis of calibration curves) met validation criteria
		for all initial calibrations. $\frac{\text{%RPD} \leq 15, \text{ if } 1^{\text{st}} \text{ order fit then } r > 0.995}{\text{ order fit then } r > 0.995}$
$\boxtimes$		Continuing calibrations were performed at the specified frequency. 1 per 12 hour sequence
$\boxtimes$		The RRFs met validation criteria for all continuing calibrations. $RRF > 0.05$
$\boxtimes$		The percentage difference (%D) from the initial calibration met validation criteria for all
		continuing calibrations. ±25%D

The following deficiencies were found:

Instr	Date/		I	Calibration	Affected Samples	Action
ID	Time	Analyte	/ C	Deficiency	Affected Samples	Action
MSVOA4	10/09/01	All parameters are within control limits	I	RRF%RSD %		
MSVOA1	10/25/01 10/30/01	within control limits				
MSVOA3	10/19/01			Frequency		
MSVOA5	10/29/01					
MSVOA2	11/01/01					
MSVOA3	11/05/01	All parameters are	C	RRF		
	at 10:17	within control limits	l	%RSD%		
				% 		
			•	Frequency		
MSVOA4	10/25/01	All parameters are	$\frac{1}{c}$	RRF		
10000011	at 09:08	within control limits		□%RSD %		
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		□%D %		
				Frequency		
				r		
MSVOA1	10/25/01	All parameters are	C	RRF		
	at 13:22	within control limits		☐%RSD%		
				% %		
				Frequency		
MSVOA4	10/26/01	All parameters are	$\frac{1}{c}$	RRF		
1/15 / 0111	at 09:54	within control limits		%RSD %		
				□%D%		
				Frequency		
			$oldsymbol{ol}}}}}}}}}}}}}}}}}$	□r		
MSVOA1	11/02/01	All parameters are	C			
	at 12:00	within control limits		%RSD%		
				□%D%		
				Frequency		
l .	1			<u>                                      </u>	1	

## Calibration Deficiencies Table, cont.

Instr ID	Date/ Time	Analyte	I / C	Calibration Deficiency	Affected Samples	Action
MSVOA1	11/05 /01 at 13:26	All parameters are within control limits	C	RRF  %RSD %  "MD %  Frequency r		
MSVOA5	10/30 /01 at 10:17	All parameters are within control limits	C			
MSVOA2	11/05 /01 at 11:30	All parameters are within control limits	2			
Ren	narks:					

The	following deficiencies	were found:					
ample ID	Internal Standard	Sample IS Area Limits IS Area Upper Lower			Sample IS RT	IS RT Limit Upper Lowe	
	Standard		***************************************			34444444	
					1		
							<del>                                     </del>
							<u> </u>
				<del>                                     </del>			1
							ļ
							<del> </del>
	<u> </u>		4		<b>.</b>		
Internal Sta	andard		Name				
IS1(DFB)			1,4-Difh	urorbenzene			
IS2CBZ)				enzene-d5	14		
IS3(DCB)				lorobenzene-	14		-
IS4			Not app	iicable			
Remarks:							

INTERNAL STANDARDS

IX.

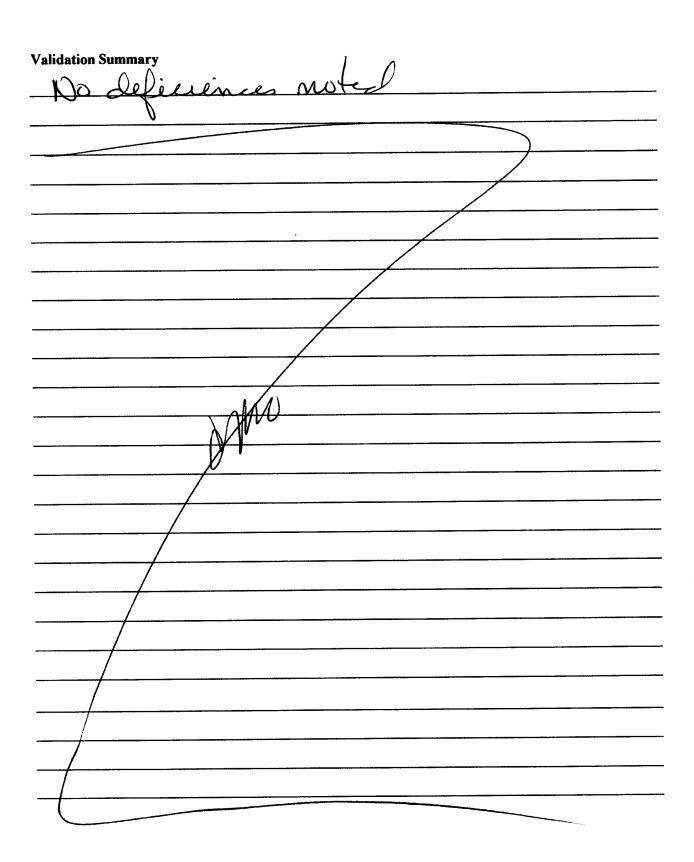
Χ.	QUANTITATION LIMIT RESULTS										
Yes ⊠ □	No No deficiencies were found. Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met.										
The fo	The following deficiencies were found:										
	Sample	ID	Comp	ound(s)	RQL	CRQL	Action				
F1129	8-06		Toluene – See	Note 1							
				1							
		<u>.</u>									
Analy elevated -05, -1											
	Analyte		Reported Value	Recalculated Value		Samples					
Rem	arks:										

E\*Data, Inc. Volatile Validation Checklist June 2002

Calculations were spot-checked.

# QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Wet Chemistry Data

Project File(s)	F12178, F12221		Sampling Date(s)	01/30/02, 02/	05/02
Laboratory	Accutest - New Jer	sey	Receipt Date(s)	Same or Next Day	
SDG Number	F12178		Matrix	☐ Water ☐ Air	
		1		Soil/Sedia	ment
Sample Identifi	cation Numbers:				
F12178-02	F12178-07	F12221-04	F12221-09		
F12178-03	F12178-08	F12221-05			
F12178-04	F12178-09	F12221-06			
F12178-05	F12221-02	F12221-07			
F12178-06	F12221-03	F12221-08			
Analytica USEPA S	s Waste Remedial . I Data (HAZWRAP I W846 (SW-846) Me Center for Environm	OOE/HWP-65/R2 thods	)		Quality Control of
Parameter TOC	Method Corp Eng 81M	<u>Parameter</u>	Method	<u>Paramete</u>	r <u>Method</u>
-Solids	EPA 160.3 No	T Revenuel C	me		
duplicate (MS rinsate blank re	parameters were exa /MSD) results, labor esults, field and labor sult verification.	ratory control san	nple (LCS) results, sults, initial and conf	method blank	results, field and/or ons, reporting limits



Qualifiers:J - Approximate data due to other quality control criteria.U - Not detected.J - Approximate data due to other quality control criteria.R - Unusable.UJ - Not detected, limit of detection approximate.											
<ul> <li>I. HOLDING TIME</li> <li>Yes No</li> <li>✓ All samples were handled and preserved according to requirements.</li> <li>✓ All samples were extracted and analyzed within holding time criteria.</li> </ul> The following deficiencies were found:											
Sample I.D.	Matrix	Preservation	Collection Date	Extraction Date	Analysis Date	Qualifier Flag					
Remarks:											

E\*Data, Inc. Wet Chemistry Data Validation Checklist May 2000

II.	CALIE	RATIONS (Instrun	nent	al Meth	ods)		
Yes ⊠	No	The initial calibra concentrations plus			ted of	6-point curve bracketing the	expected sample
$\boxtimes$		The correlation coef	ficie	ent for ea	ch analy tions (	te in multipoint calibrations was a CCVs) were performed at the	≥ 0.995. method-specified
$\boxtimes$		The % Recovery for	or e	ach of t	he CCV	s (bracketing samples) was wit	hin control limits
$\boxtimes$		(90 - 110%). No deficiencies were	e no	ted.			
The fo	llowing o	leficiencies were foun	d:				
Date/ Time	Analy	yte	I / C	Corr Coeff	%R	Affected Samples	Action
			_				
			-				
			-				
			$\dagger$				
			<u> </u>				
<u> </u>			<u> </u>				
Rema	ırks:						
			·· <del>····</del>				

HII. BLANKS (Method blanks, calibration blanks, field blanks, etc.)  Yes No  At least one preparation blank was prepared with each batch of samples.  Blanks were reported at the RL for all non-detects.  Field QC samples were associated with this SDG.  No deficiencies were noted.								
Field QC as	sociated wi	th this SDG were:						
***************************************	F	ield Blanks		Equipment Rinsate Blanks				
The following	ng contami	nants were detected in blan	nks associated v	with sample	s in this SDG: Associated Samples			
DIANK 1D	Matrix		Conc	Level	Associated Samples			
GP14847	Soil	TOC less than RL						
GP14857	Soil	TOC less than RL						
		· · · · · · · · · · · · · · · · · · ·						
Remarks:								

IV.	LA	BORA	TOR	Y CO	NTRO	L SAMPLE						
Yes ⊠ ⊠	No	L	CS rec	coveri		alysis was perform within criteria ( noted.					- 120%	6 for soil).
The fol	lowi	ng com	pound	is fell	outside	the specified Q	C limits:					
LCS II	D		Mat	trix	Com	pound			%R		ontrol mits	Qualifier Flags
				- 1					·	+		
							-					
		·								-		
	<del></del>									+		
LCS S	lumr	nary: (	Jnacc	eptabl	e recov	veries for each LC	CS analysis	in the S	DG.	<b>!</b>		
LCS II	)	GP14	847		latrix:	Soil	LCS ID	GP14	1857		Matrix:	Soil
Spike I	Recor	very	0	Out of	1	Outside Limits	Spike Reco	overy	0	Out of	1	Outside Limits
Remar	'ks:											
											<del></del>	

Yes No	M: SI Al	OG# <u>F121</u> I recoverie	wa: 78 s a:	s performand F12 and relation	med on s 2221.	sample	F12	178-05 a		12221-02 fo		
Type Analysis		Analyte			i i	MS Reco	ery	MSD Recove	ery	MS/MSD QC Limits	RPD	RPD Limit
MS/MSD S	umma				overies j	per the			of mat	rix spike reco		the fraction
Sample ID	1	F1217			T			nple ID	T ====	F12221		10.3
SDG	F121			Matrix	Soil	$\perp$	SD		<del></del>	2221	Matrix	Soil tside limits
Spike Rec. Remarks:	] 0	out of	1	Outs	side limi	us	Spi	ke Rec.	0	out of	1 ou	wide imite
	***************************************											

VI.	DUPLI	CATE ANALYSES				
Yes ⊠ ⊠	No	Laboratory duplicate ana. RPDs for the laboratory	lyses were performed v duplicate analyses w	with each sample beere within criteria	atch. guidelines (<	% for
$\square$		water, or <30% for soil). Field duplicates were assoqualification for field duplication.				
Field S	ample/D	Ouplicate ID:	F12221-07/-09		Matrix: So	<u>il</u>
Labora	atory Sa	mple/Duplicate ID:	F12178-05 and F122	221-02	Matrix: So	<u>il</u>
		cent difference (RPD) is c There are no specific rev				sample or
	RPD is	calculated using the follow	wing equation:	RPD: <u> A-B</u> (A+B)	x 100 /2	
					imple Result uplicate Sampl	e Recult
The fol	lowing d	eficiencies were found:		2 -	······································	e Rosuit
Туре	Duplica			ile Duplicate	RPD	Action
Туре	Duplica nalysis	te Compour	id Samp Resu	ile Duplicate	•	
Type Aı	Duplica nalysis	te Compour		ile Duplicate	•	
Type Aı	Duplica nalysis	te Compour		ile Duplicate	•	
Type Aı	Duplica nalysis	te Compour		ile Duplicate	•	
Type Aı	Duplica nalysis	te Compour		ile Duplicate	•	

A 1	D 4-3	CDDI	Action
Analyte	Reported RL	CRRL	Acuon

VIII.	SAMPLE RE	SULT VERIFICAT	ION (Full Raw Dat	a Package Validation Only)
Yes	No ⊠ Calcul	ations for all positive	e hits were verified.	
The fo	llowing discrepa	ncies were found:		
	Analyte	Reported Value	Recalculated Value	Sample
			1	
Rem Calc	arks: ulations were spo	ot-checked.		

# QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Volatile Organic Analytes by GC/MS

Project File(s)	F13055, F13066		Sampling Date(s)	4/30/02, 5/1/02		
Laboratory	Accutest - Orlando	FL	Receipt Date(s)	Same or Next	Day	
SDG Number	F13055		Matrix	☐ Water	☐ Air	
				Soil/Sedin	nent	
Sample Identifi	cation Numbers:					
F13055-02	F13055-09	F13055-14	F13066-02			
F13055-03	F13055-10	F13055-15	F13066-03	······································		
F13055-04	F13055-11	F13055-16	F13066-04	· · · · · · · · · · · · · · · · · · ·		
F13055-05	F13055-12	F13055-17				
F13055-06	F13055-13	F13066-02				
Analytical USEPA C Data Revi USEPA S USEPA D Air Force Other: Laboratory esta The following matrix spike / blank results,	Data (HAZWRAP I ontract Laboratory Pew (EPA-540/R-94/W846 (SW-846) Mediniking Water (DW) Center for Environmental blished accuracy and parameters were exparameters were exparameters which is the content of the conten	Program (CLP) Na 012, February 199 ethods (8260) Methods (524.2, hental Excellence of d precision control amined: holding ate (MS/MSD) re rinsate blank re	ational Laboratory Fu 93) 624, 1624) (AFCEE) QAPP Vers	nctional Guideli sion 3.0 eservation, surro trol sample (LC e results, instr	ogate spike results, CS) results, method	
Reviewed by	Ras	Ohl c	2	Date: 6	26/02	
QA Concurrence	œ by:		***************************************	Date:	······································	

alidation Summary	
Poor field precision between duplicate samples for ethylbenzene and xylene. The results sample and its duplicate are qualified as estimated and flagged "J."	s of the primary
ī	
	W
	· · · · · · · · · · · · · · · · · · ·

Validation Summary (cont.)
· · · · · · · · · · · · · · · · · · ·

**Qualifiers:**U - Not detected. R - Unusable.

J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

### I. HOLDING TIME AND SAMPLE PRESERVATION

Sample ID	Matrix	Preservation	Collection	Extraction	Analysis	Qualifie
		,	Date	Date	Date	Flag
	_				· · · · · · · · · · · · · · · · · · ·	
			······································			
			· · · · · · · · · · · · · · · · · · ·			
<del></del>						
***************************************					·	

### **SURROGATE SPIKE RECOVERIES** II.

Yes

Sample ID	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4
,				
		· ·		
<del>.</del>				
<del></del>				

		QC	Limits
Surrogate	Name	Water	Soil
SMC1 (DFM)	Dibromofluoromethane		75 – 125
SMC2 (TOL)	Toluene-d8		75 – 125
SMC3 (BFB)	p-Bromofluorobenzene		72 – 137
SMC4 (DCB)	1,2-dichlorobenzene-d4		68 – 125

Remarks:			
		,	

III. N	MAT	rix	SPIKE/M	IATR	IX SPIKE I	DUPLIC	ATE	ANAL	YSIS				
		M	S/MSD an	alysis	rix Spike Du was perforn relative perc	ned on sa	mple	F13055	-06 ar	<u>nd -11</u> fou	nd in S	DG# _	OG. <u>F13055.</u>
The follo	wing	g defic	iencies we	ere fou	ınd:								
Matrix			Anal	yte		MS Recove	1	MSI Recove		MS/MSD QC Limit	- 1	RPD	RPD Limit
								<del></del>					
****	-	<i>y.</i>							_				
i		··· · · · · · · · · · · · · · · · · ·		<del></del>			·						
	_						-						
See For	m III		ta package	). 	le recoveries	per the t			of matr	ix spike rec		s in the	e fraction.
Sample I	עו	F130	F1305		atrix Soil		SD	nple ID	F130		5-00 Ma	triv	Soil
RPD		0	out of		outside lim	its	RP		0	out of			ide limits
Spike Re	c.	0	out of	8	outside lim			ke Rec.	0	out of	8		de limits
Remarks	S:										1 10		
	Not	e: No	action w	ill be	taken based	on MS/	MSD	data al	one. S	Sample res	ults m	ay be	affected

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by either a positive or negative bias due to deficient recoveries.

CS ID	Matrix	Comp	ound			%R	Control	Qualifier
							Limits	Flags
			,					
							-	
							-	
		-						
						<u></u>		
CS Summary:	Unacceptal	ble recov	veries for each LC					
	46-BS	Matrix:	veries for each LC	CS analysis	in the SDO	-BS	Matrix:	Soil
CS ID VH5		Matrix:			VH547-	-BS	Matrix: Out of 1	Soil Outside Limit
CS ID VH5	<b>46-BS</b> Ou <b>0</b> of	Matrix: t 4	Soil Outside Limits	LCS ID	VH547-	-BS	 Out	
CS ID VH5 pike Recovery CS ID VH5	Ou of Out	Matrix:  4  Matrix:	Soil Outside Limits Soil	LCS ID Spike Reco	VH547-	BS	Out of 1  Matrix: Out	Outside Limi
CS ID VH5  pike Recovery  CS ID VH5	0 Ou of 545-BS	Matrix:  4  Matrix:	Soil Outside Limits	LCS ID  Spike Reco	VH547-	BS	Out of 1  Matrix: Out of	Outside Limit
CS ID VH5  pike Recovery  CS ID VH5  pike Recovery	0 of 0 of 645-BS Ou 0 of	Matrix: t 4 Matrix: tt 4 Matrix:	Soil Outside Limits Soil	LCS ID Spike Reco	VH547-	-BS	Out of 1  Matrix: Out of  Matrix:	Outside Limit
CS ID VH5  pike Recovery  CS ID VH5  pike Recovery  CS ID	Ou 0 of 645-BS Ou 0 of	Matrix:  t 4  Matrix:  tt 4  Matrix:  tt Matrix:	Soil Outside Limits Soil	LCS ID  Spike Reco	VH547-	-BS	Out of 1  Matrix: Out of	
CS ID VH5	0 of 0 of 645-BS Ou 0 of	Matrix:  t 4  Matrix:  tt 4  Matrix:  tt Matrix:	Soil Outside Limits  Outside Limits	LCS ID Spike Reco	VH547-	-BS	Out of 1  Matrix: Out of  Matrix: Out	Outside Limi Outside Limi
CS ID VH5  pike Recovery  CS ID VH5  pike Recovery  CS ID	0 of 0 of 645-BS Ou 0 of	Matrix:  t 4  Matrix:  tt 4  Matrix:  tt Matrix:	Soil Outside Limits  Outside Limits	LCS ID Spike Reco	VH547-	-BS	Out of 1  Matrix: Out of  Matrix: Out	Outside Limi Outside Limi
CS ID VH5  pike Recovery  CS ID VH5  pike Recovery  CS ID  pike Recovery	0 of 0 of 645-BS Ou 0 of	Matrix:  t 4  Matrix:  tt 4  Matrix:  tt Matrix:	Soil Outside Limits  Outside Limits	LCS ID Spike Reco	VH547-	-BS	Out of 1  Matrix: Out of  Matrix: Out	Outside Limi Outside Limi

LABORATORY CONTROL SAMPLE

IV.

Yes

## V. BLANK ANALYSIS RESULTS

A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

Blank ID	Matrix	Compound	Conc	Action Level	Associated Samples
VH546-MB	Soil	All target parameters less than RL			
VH547-MB	Soil	All target parameters less than RL			
VH545-MB	Soil	All target parameters less than RL			
10-10-10-10-10-10-10-10-10-10-10-10-10-1				<u> </u>	
	<u> </u>				

Remarks:			

QC (Blank	<b>s</b> ):				
Field QC	c samples w	ere associa	ated with th	nis SDG.	
ciated with	this SDG w	ere:			
rip Blanks				Equipme	nt Rinsate Blanks
ran by SW	8021)	F13055	-07 (ran by	SW8021)	F13066-05 (ran by SW8021)
ran by SW	8021)	F13055	-08 (ran by	SW8021)	
ran by SW	8021)	F13055	-18 (ran by	SW8021)	
g contamina	nts were det	ected in th	ne field QC	: :	
Matrix	Compour	nd	Conc	Action Level	Associated Samples
				<del> </del>	
		,			
		nnk sample	es were abs	sent target p	arameters at concentrations greater tha
	Field QC ciated with rip Blanks ran by SW fran by SW g contamina Matrix	rip Blanks ran by SW8021) ran by SW8021) ran by SW8021) geontaminants were det  Matrix Compour	Field QC samples were associated with this SDG were:  rip Blanks ran by SW8021) F13055 ran by SW8021) F13055 g contaminants were detected in the Matrix Compound  Matrix Compound	Field QC samples were associated with the ciated with this SDG were:  rip Blanks ran by SW8021) F13055-07 (ran by F13055-08 (ran by F13055-18 (ran by Gran by SW8021) F13055-18 (ran by Gran b	Field QC samples were associated with this SDG.  ciated with this SDG were:    Fig.

VI. FIEL	D PRECISION	RESULTS				
Yes № □ □ □ □ □ □ □ □ □	Qualification Relative perceliquid (30% f When one or	or solid samples both results wer	data was attem (PDs) between on when both san re <5 x the RL		≥5 x the RL. luplicate samp	
Note: In the	absence of proj	ect specified cri	teria the follov	ving guidelines a	re recommen	ded:
<del></del>	water samples  For sample re	(70% for soil se	<del>amples).</del> L, the RPD bet	etween field duplic ween field duplic r soil samples).		
Field Sample	/Duplicate ID:	F13055-14/-17	Matrix: S	<u>oil</u>		
field duplicate				sitive result identi		he sample or
RPD	is calculated usi	ng the following	equation:		<u>-B </u> x 100 B)/2	
					Sample Resul Duplicate Sar	
	Fi	ield Precision E	valuation Defic	ciency Workshee	t:	
Analyte	RL	5 x RL	Sample Result	Duplicate Result	RPD	Action
Toluene	270	1350	187	ND	NC	< 5X RL
Ethylbenzene	270	1350	5000	62300	170%	J - Detects
Xylene	820	4100	7640	53600	150%	J - Detects
Remarks: Poor field pre	ecision between o	luplicate samples	s for ethylbenze	ene and xylene. Th	e results of the	e primary

VII.	GC/MS TUNIN	G - INSTRUMENT PERF	ORMANCE	
Yes ⊠	No All tune	s were compliant.		
The brace f	romofluorobenzene ound to fall outside	e (BFB) standard performance the specified criteria:	e results were reviewed a	nd the following abundanc
	m/z	Required Abundance	Actual Abundance	
		,		1
				-
				-
				_
Rema	rks:			
		<u> </u>		

## VIII. INITIAL AND CONTINUING CALIBRATIONS

Yes	No	
$\boxtimes$		The average relative response factors (RRF <sub>svs</sub> ) met validation criteria for all initial
		calibrations. $RF > 0.05$
$\boxtimes$		The percent relative standard deviation (%RSD) of the calibration or response factors (or
		correlation coefficients for regression analysis of calibration curves) met validation criteria
		for all initial calibrations. $\frac{\text{%RPD} \leq 15, \text{ if } 1^{\text{st}} \text{ order fit then } r > 0.995}{\text{ order fit then } r > 0.995}$
$\boxtimes$		Continuing calibrations were performed at the specified frequency. 1 per 12 hour sequence
		The RRFs met validation criteria for all continuing calibrations. $RRF > 0.05$
$\boxtimes$		The percentage difference (%D) from the initial calibration met validation criteria for all
		continuing calibrations. ±25%D

The following deficiencies were found:

Instr ID	Date/ Time	Analyte	I Calibration / Deficiency C		Affected Samples	Action
MSVOA3	05/03/02	All parameters are within control limits	I			
MSVOA3	05/06/02 at 11:02	All parameters are within control limits	С	☐RRF% ☐%RSD% ☐%D% ☐Frequency ☐r		
MSVOA3	05/07/02 at 10:55	All parameters are within control limits	С			
MSVOA3	05/08/02 at 14:20	All parameters are within control limits	C	RRF%RSD%  \[ \rightarrow \text{ND} \rightarrow \text{Frequency} \]  \[ \rightarrow \text{r}		
				RRF%RSD%%D%Frequency		
				RRF%RSD%%D%Frequency		

	No All internal stand All retention time	ard areas were with as for the internal s	hin control lin tandards were	nits. within contr	ol limits.			
,	The following deficiencie	s were found:						
Sample I	D Internal	Sample		Limits	Sample	IS RT Limit		
	Standard	IS Area	Upper	Lower	IS RT	Upper	Lower	
			<u> </u>					
	****							
						<u> </u>		
						<del>                                     </del>	1	
						<u> </u>		
T 4	16411		Name					
Interna IS1(DF)	l Standard			ırorbenzene		<u> </u>		
IS2CBZ			Chlorobe	enzene-d5				
IS3(DC				lorobenzene-	<u>d4</u>			
IS4			Not appl	icable				
Remark	s:							

Χ.	QUANTITATI	QUANTITATION LIMIT RESULTS					
Yes ⊠ □		No deficiencies were found.					
The fo	llowing deficienci	ies were found:					
Sample ID		Comp	Compound(s)		CRQL	Action	
Remarks:  Analyses were performed using diluted sample aliquots to properly quantify target parameters present at elevated concentrations. Nominal quantification limits were not achieved in samples F13055-02, -03, -04, -05, -09, -10, -11, -13, -14, -15, -16, -17; F13066-02, -04.							
XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)							
Yes No  Calculations for all positive hits were verified.							
The f	ollowing discrepa	ncies were found:					
Analyte Re		Reported Value	ported Value Recalculated Value		Samples		
-						· · ·	

Remarks:

Calculations were spot-checked.

# QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Polynuclear Aromatic Hydrocarbons (PAH) by HPLC

Project File(s)	F13055, F13066, 22	204044	Sampling Date(s)	4/30/02, 5/1/02, 05/10/02				
Laboratory	Accutest - Orlando FL (F-series) PEL Laboratory - Tampa FL (220404)		Receipt Date(s)	Same or Next Day				
SDG Number	F13055		Matrix	☐ Water ☐	Air			
			Soil/Sediment					
Sample Identifie	cation Numbers:							
F13055-01 EB	F13055-06	F13055-11	F13055-16	F13066-03	220404403			
F13055-02	F13055-07 <sup>EB</sup>	F13055-12	F13055-17	F13066-04				
F13055-03	F13055-08 EB	F13055-13	F13055-18 <sup>EB</sup>	F13066-05 EB				
F13055-04	F13055-09	F13055-14	F13066-01 <sup>EB</sup>	220404401 EB 0	····			
F13055-05	F13055-10	F13055-15	F13066-02	220404402				
The general criteria used to determine the data performance and quality assurance were based on:  Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)  USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)  USEPA SW846 (SW-846) Methods (8310)  USEPA Drinking Water (DW) Methods (550.1, 610)  Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0  Other:  Laboratory established accuracy and precision control limits.  The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field blank results, field duplicate results, initial and continuing calibrations, internal standards, compound identification, and detection limits.								
Reviewed by	Jus C	Alc.	<u>\( \) \</u>	Date: 6/27/	UI			
QA Concurren	ace by:			Date:				

#### Validation Summary

Second column confirmation was not performed as specified in the laboratory statement of work. Instead, the laboratory performed confirmation by spectrum match using a diode array detector at two different wavelengths (254 and 270 nm for Accutest work. Wavelengths not documented for PEL)

Quantifications were calculated from the primary detector response, unless in the analyst judgement the measurement was biased. Higher concentrations may be measured and reported from the secondary detector response if a more conservative concentration is required.

The laboratory sample receipt form indicates that sample 011-04-posteb-w-01-03 was listed twice and that the bottles were labeled at 16:30 and 17:35. There is no notice that CCI was notified and that the discrepancy was resolved.

Phenanthrene was detected in an aqueous method blank. Action levels were determined using the 5X Rule. Sample results less than the action levels are qualified as non-detected and flagged "U." None of the associated samples needed qualification.

MS/MSD analyses performed on PEL sample ID 2204044-02 found in SDG# 2204044 were above the upper recovery control limits. No action was taken to qualify the sample results because acenaphthene was not detected in any of the associated samples.

For sample F13055-05 the 2-methynaphthalene report limit is elevated due to matrix interference.

The laboratory report limits provided by Accutest and PEL are not matched. Lower analyte sensitivities are reported by PEL.

#### Qualifiers:

U - Not detected.

No

J - Approximate data due to other quality control criteria.

R - Unusable.

Yes

UJ - Not detected, limit of detection approximate.

# I. HOLDING TIME AND SAMPLE PRESERVATION

Sample ID	Matrix	Preservation	Collection Date	Extraction Date	Analysis Date	Qualific Flag
<u></u>						
			<u> </u>			+
marks:						

# **SURROGATE SPIKE RECOVERIES** II. Yes All recoveries were within control limits. At least one of the deficient recoveries was outside control limits due to dilutions. No deficiencies were found. The following deficiencies were found: % Recovery Surrogate 4 Surrogate 3 Surrogate 2 Sample ID Surrogate 1 **QC** Limits Soil Water Name Surrogate **Accutest Laboratory** 37 - 15833 - 141o-terphenyl Surrogate 1 31 – 122 59 - 149p-terphenyl Surrogate 2 Not applicable Surrogate 3 Not applicable Surrogate 4 **PEL Laboratory** 17 – 119 39 107 p-terphenyl-d14 Surrogate 1

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January 2000

Remarks:

Yes	No	
	П	Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG.
$\boxtimes$	$\Box$	MS/MSD analysis was performed on sample F13055-11 and 2204044-02 found in
	_	SDG# F13055 and 2204044.
	$\boxtimes$	All recoveries and relative percent differences (RPDs) were within control limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SAMPLES

The following deficiencies were found:

III.

Matrix	Analyte	MS Recovery	MSD Recovery	MS/MSD QC Limits	RPD	RPD Limit
2204044	-02	,				
Soil	Acenaphthene	267	270	43 – 89		

MS/MSD Summary: Unacceptable recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

Sample ID		F1305	55-11			Sample ID		22040	<u>44-02</u>		
SDG	F130		-	atrix	Soil	SDG	2204	044	Ma	trix	Soil
RPD	0	out of	18		ide limits	RPD	0	out of	18	Outs	ide limits
Spike Rec.	0	out of	36	outs	ide limits	Spike Rec.	2	out of	36	outsi	de limits

Remarks: Acenaphthene was not detected in any of the associated samples.

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

Yes ⊠ ⊠					llysis was perfort within criteria.	ned per bate	ch of sa	mples.				
The foll	lowing con	pound	s fel	l outside	the specified QC	C limits:						
LCS II	)	Mat	rix	Comp	ound			%R		ontrol mits		Qualifier Flags
					,						_	
		<b> </b>										
								<u> </u>			$\dashv$	
ļ												
LCS S	ummary:	Unacce	eptat	ole recov	veries for each LC	CS analysis	in the S	DG.				
LCSID	OP50	)89-BS		Matrix:	Water	LCS ID	OP50	)87-BS		atrix:	So	il
Spike F	Recovery	0	Out of		Outside Limits	Spike Reco	overy	0	Out of	18	Οι	tside Limits
LCS II	514L	.CS		Matrix:	Water	LCS ID	523L	CS	M	latrix:	So	il
	Recovery	0	Ou		Outside Limits	Spike Reco	overy	0	Out of	18	Oı	ntside Limits
Remai	rks:											
												-
<u> </u>												

LABORATORY CONTROL SAMPLE

IV.

# V. BLANK ANALYSIS RESULTS

A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.)

Blank ID	Matrix	Compound	Conc	Action Level	Associated Samples
OP5087-MB	Soil	All target parameters are less than the RL			
OP5089-MB	Water	All target parameters are less than the RL			
514BLK	Water	Phenanthrene	0.28 mg/Kg	1.4 mg/Kg	2204044-01, -02, -03
523BLK	Soil	All target parameters are less than the RL			
				_ I	

Remarks: All method blank analyses were absent target parameters at concentrations greater than the RL.

B. Fiel	d QC (Blank	is):			
Yes No ⊠ □		samples were asso	ciated with	this SDG.	
Field QC as		this SDG were:		<u></u>	
	Field	Blanks			Equipment Rinsates
				F13055-01	F13055-18
				F13055-07	F13066-01
			,	F13055-08	F13066-05
The followi	ng contamina	nts were detected in	the field C	C:	2204044-01
Blank ID	Matrix	Compound	Conc	Action Level	Associated Samples
		<u></u>			
Remarks: All field e	quipment blar	nk analyses were abs	sent target	parameters at	t concentrations greater than the RL.
E#D-4- T					

Qualification Relative perc liquid (30% When one or less than 1 x  absence of proj  For sample r water sample For sample r RL for water  /Duplicate ID:	for solid samples both results we RL for water samplest specified critically solds and the solds are solds as \$1.00 for soil \$	e data was attem RPDs) between (a) when both san re <5 x the RL, mples (2 x RL iteria the follow RL, the RPD beamples). RL, the RPD between 2x the RL for	pted. luplicate sample re uple values were ≥ RPDs between de for soil samples).  ring guidelines ar  etween field duplicate soil samples).	5 x the RL. uplicate sample e recommend cate samples	ed:
When one or less than 1 x  absence of projectors sample resease sample resease For sample results for water  // Duplicate ID:	pect specified criesults >5 x the secults <5 x the results <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the security secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x the secults <5 x t	re <5 x the RL, mples (2 x RL iteria the follow RL, the RPD bamples). RL, the RPD betan 2x the RL for	RPDs between defor soil samples).  ring guidelines are etween field duplicate soil samples).	uplicate sample e recommend	ed: was <40% for
For sample r water sample For sample r RL for water /Duplicate ID:	results >5 x the soults <5 x the less the samples (less the	RL, the RPD b amples). RL, the RPD bet an 2x the RL for	etween field duplica ween field duplica soil samples).	eate samples	was <40% for
water sample For sample r RL for water /Duplicate ID:	es (70% for soil s esults <5 x the F samples (less th	amples). RL, the RPD bet an 2x the RL for	ween field duplica soil samples).		
-	F13055-14/-17	Matrix: S	ail		
			<u>711</u>		
	e (RPD) is calcul	ated for each po	sitive result identif	fied in either th	ne sample or
is calculated usi	ing the following	equation:			
				-	
F	Field Precision E	valuation Defic	iency Worksheet	:	
RL	5 x RL	Sample Result	Duplicate Result	RPD	Action
					<u> </u>
	1	İ	1		
2	is calculated us	is calculated using the following  Field Precision E	is calculated using the following equation:  Field Precision Evaluation Defice  RL 5 x RL Sample	is calculated using the following equation:  RPD: A-(A+I)  A = B = Field Precision Evaluation Deficiency Worksheet  RL 5 x RL Sample Duplicate	is calculated using the following equation:  RPD: A-B x 100  (A+B)/2  A = Sample Result B = Duplicate Sam  Field Precision Evaluation Deficiency Worksheet:  RL 5 x RL Sample Duplicate RPD

# VII. INITIAL AND CONTINUING CALIBRATIONS

Yes	No	
$\boxtimes$		The initial calibration has a minimum of <u>5</u> standards.
$\boxtimes$		Percent relative standard deviation (%RSD) for all compounds was ≤15% for all calibration
		factors in the initial calibration.
$\boxtimes$		For first-order calibration curves, the coefficient of the determination (COD) was $\geq$ 0.995
		for all compounds in the initial calibration.
$\boxtimes$		The calibration verification standard (midpoint concentration) was analyzed at the beginning of every 12-hour analytical shift and at the end of the analytical sequence to bracket the sample analyses.
M		Calibration verification standards (midpoint concentration) were analyzed every <u>10</u> samples.
$\boxtimes$		For the calibration verification(s), the percent difference (%D) was within ±15% of the
		response obtained during the initial calibration for all compounds.
$\boxtimes$		Standard retention times were within control windows.
$\boxtimes$		The analytical sequence was followed.

The following deficiencies were found:

Inst ID	Date/ Time	Analyte	I / C	% RSD	%D	Affected Samples	Action
GCEE	04/22/02	Within control limits	I				
GCEE	05/07/02 at 14:46, 18:21, 21:31	Within control limits	С				
GCEE	05/13/02 at 16:11, 18:58, 22:08	Within control limits	C				
GCEE	05/14/02 at 01:19, 17:07, 21:28	Within control limits	C				
GCEE	05/08/02 at 00:41	Within control limits	C				
SLC02	04/22/02	Within control limits	I				
SLC02	05/14/02 at 15:40, 23:38	Within control limits	C				
SLC02	05/14/02 at 06:33, 10:24	Within control limits	C				
SLC02	05/23/02 at 19:15	Within control limits	C				
SLC02	05/24/02 at 12:10	Within control limits	C				
SLC02	05/16/02 at 11:50	Within control limits	C				

#### Comments:

Some parameters may have been fit using a quadratic curve.

# INTERNAL STANDARDS

Yes No	An internal standard control All retention times for All internal standard and No deficiencies were found:	the internal stareas were withing the count.	andards were w	rithin control l s.	imits.		
					Sample	Dat Tiv	ne Limit
Sample ID	Internal	Sample	IS Area	Lamas Lower	Sample	Upper	Lower
			Upper	P. P. CANASI			***************************************
							1
				<del> </del>			
							-
						<u> </u>	
		•					,
Internal Star	ndard		Name				
					<u> </u>		
Remarks:							

E\*Data, Inc. PAH Data Validation Checklist January 2000

# REPORTING LIMIT RESULTS Yes No No deficiencies were found. Reporting limits (RL) were provided, but one or more contract or QAPP-required reporting limits (CRRLs) were not met. The following deficiencies were found: CRRL Action RL Sample ID Compound 370 None F13055-05 2-methylnaphthalene 740 Remarks:

For sample F13055-05 the 2-methynaphthalene report limit is elevated due to a matrix interference.	
	_
	_

IX.	COMI	POUND IDENTII	FICATION					
Yes □ ⊠	No ⊠ □	All positive deter	of reported	compounds	were within	column.	ited window	v for both the
		primary and confirmation and The % Difference within guidelines	alysis was po e (%D) betw	erformed by	GC/MS.	column resu	lts for all co	ompounds was
$\boxtimes$		Raw data were in	ncluded with	the analytic	al report. Ch	nromatogram	s were evalu	iated.
The fo	ollowing	deficiencies were f	ound:					
Sam	ple ID	Compound	RT 1 <sup>st</sup> Result 1 <sup>st</sup> Column Column		RT 2 <sup>nd</sup> Column	Result 2 <sup>nd</sup> Column	% D	Action
<u> </u>								
	. <u></u>							
Seco	ratory ne	nn confirmation was erformed confirmat (254 and 270 nm f	ion by spect	rum match u	sing a diode	array detecto	r at two dill	ork. Instead, the
				<del></del>				

# QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Total Petroleum Hydrocarbons (TPH) by GC

Project File(s)	F13055, F13066		Sampling Date(s)	4/30/02, 5/1/02
Laboratory	Accutest - Orlando F	FL	Receipt Date(s)	Same or Next Day
SDG Number	F13055		Matrix	☐ Water ☐ Air
				Soil/Sediment
Sample Identifie	cation Numbers:			
F13055-01 <sup>EB</sup>	F13055-06 F13055-11		F13055-16	F13066-03
F13055-02	F13055-07 <sup>EB</sup>	F13055-12	F13055-17	F13066-04
F13055-03	F13055-08 EB	F13055-13	F13055-18 <sup>EB</sup>	F13066-05 EB
F13055-04	F13055-09	F13055-14	F13066-01 EB	
F13055-05	F13055-10 F13055-15		F13066-02	
Hazardou Analytical USEPA ( Data Revi USEPA S USEPA S USEPA S Other: Laboratory est	s Waste Remedial A l Data (HAZWRAP De Contract Laboratory P ew (EPA-540/R-94/0) W846 (SW-846) Metl Orinking Water (DW) N Center for Environme  ablished accuracy and parameters were examinatrix spike duplicate	ctions Program OE/HWP-65/R2 rogram (CLP) N 12, February 199 hods – Florida F Methods ntal Excellence ( precision control mined: sample page (MS/MSD) re	(HAZWRAP) Req ) lational Laboratory (3) PRO (SW8015)  AFCEE) QAPP Ver limits.  preservation and holesults, laboratory cor	surance were based on:  uirements for Quality Control of  Functional Guidelines for Organic  sion 3.0  dding time, surrogate spike results, atrol sample (LCS) results, method ibrations, and detection limits.
Reviewed by:	Chin (	Ilan d	Date:	6/28/02
QA Concurren	ce by:		Date:	

يق المحر

# Several of the gas chromatograms indicate the potential presence of two types of hydrocarbon products. Both an early and late eluting profile is present in the analysis. Some of the TPH elutes earlier than the starting time for integrating TPH.

Validation Summary

<b>Qualifiers:</b> U - Not detected. R - Unusable.		J - Approxima UJ - Not detec	te data due to othe ted, limit of detec	er quality control c	riteria.	
Yes No A	ll samples	AND PRESERV	preserved accor	ding to requirem in holding time c	ents. riteria.	
The following defi	Matrix	Preservation	Collection Date	Extraction Date	Analysis Date	Qualifier Flag
			- Late			
Remarks:						

# SURROGATE SPIKE RECOVERIES

	Pur	Extra	Extractable				
Sample ID	Surrogate 1	Surrogate 2	Surrogate 3	Surrogate 4			
		<u> </u>		<u> </u>			
			QC Limits				
Surrogate	Name	W	ater	Soil			
Surrogate 1				••			
Surrogate 2							
Surrogate 3	o-terphenyl	55 -	<b>– 130</b>	66 – 130			
Surrogate 4							

II.	MAT	RIX	SPIKE/N	IATR	IX SPIKE I	OUPL	ICATE	ANALYSIS				
Yes ⊠ ⊠	No 	MS	S/MSD ar	nalysis	ix Spike Duj was perform relative perc	ned on	sample	F13055-11	found in S	DG# <u><b>F</b>1</u>	<u> 3055.</u>	OG.
The fol	llowing	g defic	iencies we	ere fou	nd:							
Aı	nalysis	<b>.</b>		Anal	vte		MS	MSD	MS/M	SD	%	%
Purge	NAME AND ADDRESS OF TAXABLE	stract.			Re	Recovery Recovery		QC Lii	nits	RPD	RPD	
	-					-						
	-											
			<u> </u>			-			<u></u>			
						-						
<u> </u>	_					<u> </u>						
Ĺ <u></u>												
MS/M	ISD Su	ımma	ry: Unacc	æptabl	e recoveries	per th	e total m	umber of ma	trix spike 1	ecoverie	es in the	fraction.
Sampl	e ID		F1305	55-11			Sam	ple ID				
SDG		F130	55	M	atrix Soil		SDC	ÿ			atrix	
RPD		0	out of	1	outside lim		RPD		out of			ide limits
Spike	Rec.	2	out of	2	outside lim	its	Spik	e Rec.	out of		outsi	de limits
Remai	rks:											

Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.

III.	FIELD	PRECISION 1	RESULTS								
	<b>№</b>	Field duplicate data were included in this data package. Qualification of field duplicate data was attempted. Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were $\geq 5$ x the RL. When one or both results were $< 5$ x the RL, RPDs between duplicate sample results were less than 1 x RL for water samples (2 x RL for soil samples).									
Note: I	n the al	sence of proje	ect specified cri	teria the follow	ing guidelines a	re recommend	ed:				
<b>□</b> —	<del></del>	water samples For sample re	<del>(70% for soil st</del> sults <5 x the R	<del>amples).</del>	otween field dup ween field duplic soil samples).						
Field Sa	ample/I	Ouplicate ID:	F13055-14/-17	Matrix: So	<u>oil</u>						
The rela		cent difference	(RPD) is calcula	ated for each pos	sitive result ident	ified in either t	ne sample or				
	RPD is	calculated using	ng the following	equation:	RPD: <u> A</u> (A-	-B  x 100 -B)/2					
						= Sample Resul = Duplicate San					
		Fi	eld Precision E	valuation Defic	iency Workshe	et:					
Ana	lyte	RL	5 x RL	Sample Result	Duplicate Result	RPD	Action				
Remar The pr	ks: imary s	ample and its d	uplicate exhibit	good precision							

		ix		Compound	d		ercent ecovery		Control Limits	Qualifie Flags
				1						
									Version 1	6.7
OP508	88-BS	Out	atrix:	Water	LCS ID	OP50 very	0 190-B2		t	Soil Outside Limi
		nary: Unacce	<b>OP5088-BS</b> M	OP5088-BS Matrix:	OP5088-BS Matrix: Water	OP5088-BS Matrix: Water LCS ID	OP5088-BS Matrix: Water LCS ID OP50	Out	OP5088-BS         Matrix:         Water         LCS ID         OP5090-BS           Out         Out         Out	OP5088-BS Matrix: Water LCS ID OP5090-BS Matrix:

LABORATORY CONTROL SAMPLE

IV.

# V. BLANK ANALYSIS RESULTS

A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

Blank ID	Matrix	Compound	Conc	Action Level	Associated Samples
OP5088-MB	Soil	All target parameters are less than the RL			
OP5090-MB	Water	All target parameters are less than the RL			
		,			
			i .		

Remarks: All method blank analyses were absent target parameters at concentrations greater than the RL.

es No ⊠ □ Field QC ass		C samples were an this SDG were:	ssociated wi	th this SDG.		
	Field	l Blanks	:	Ec	uipment Rinsates	
				F13055-01	F13055-18	
				F13055-07	F13066-01	
				F13055-08	F13066-05	
The followin	g contamin	ants were detected	l in the field	Action	Associated Samples	
				Level		
						<del></del>
						-
Remarks: All field eq	uipment bla	nks were absent t	arget paramo	eters at concentration	ns greater than the RL.	

VI.	INITIA	AL/CONTINUI	NG CALIBRATIONS					
Yes ⊠	No	The initial concentrations.	alibration consisted of	5-p	oint cu	rve brac	keting the expected	sample
$\boxtimes$		The correlation	coefficient of the initia		oration c	curve was	$s \ge 0.995$ ; or the %RSD	of the
$\boxtimes$		Continuing cal	oonse factors was ≤ 20% ibration verification (CC Il analyte retention time	CV) w	as perfo	ormed at	the frequency specified tention time windows	by the
$\boxtimes$		during the initi						
The fol	lowing o	leficiencies were	found:					
Inst ID		Date/ Time	Analyte	I / C	% RSD	%D	Affected Samples	Action
FID 2	04/22	2/02	Within control limits	1				
FID 2	05/07	7/02 at 11:50, 1, 19:04	Within control limits	С				
FID 2		3/02 at 01:11, 1, 12:48, 13:22	Within control limits	C				
				<u> </u>				
	_			+-				
				+				
				+-				
			•					
Remar	·ks:							

Yes ! ⊠ [ ⊠ [	Reporting lin	es were found. nits (RL) were provided, but on .s) were not met.	e or more contract or	· QAPP-required	I reporting
The follo	wing deficiencies we	re found:			
	Sample ID	Compound	RL	CRRL	Action
		· ·			
Remark	s:				

REPORTING LIMIT RESULTS

VII.

# Yes No All positive detects were verified using a confirmation column. Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. Confirmation analysis was performed by GC/MS. The % Difference (%D) between the first and second column results for all compounds was within guidelines. Raw data were included with the analytical report. Chromatograms were evaluated. The following deficiencies were found: RET 1st Result RET 2st Result Result 2st Result

Sample ID	Compound	RT 1 <sup>st</sup> Column	Result 1 <sup>st</sup> Column	RT 2 <sup>nd</sup> Column	Result 2 <sup>nd</sup> Column	% D	Action
			·				

Remarks: <u>Several of the gas chromatograms indicate the potential presence of two types of hydrocarbon products. Both</u> <u>an early and late eluting profile is present in the analysis. Some of the TPH elutes earlier than the starting</u>
time for integrating TPH.

# IX. SYSTEM PERFORMANCE

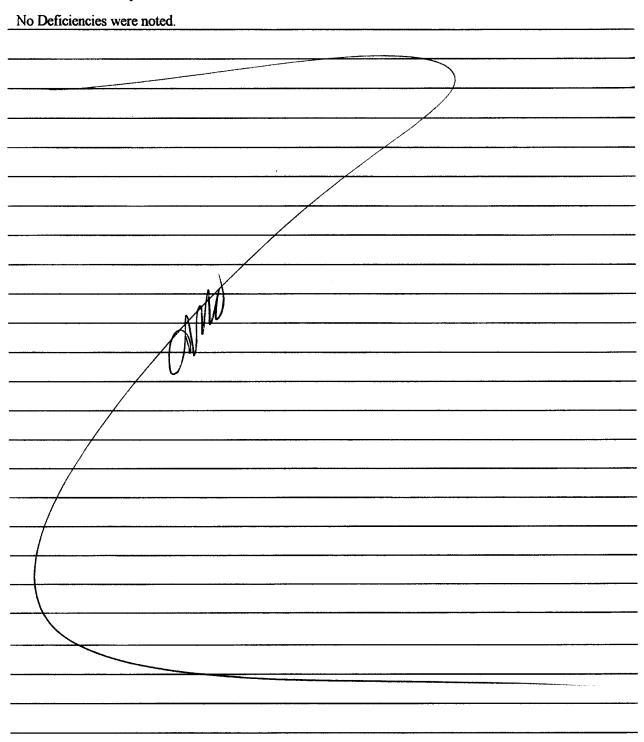
Evalua	te the sys	stem performance based on the following parameters:
Yes		Abrupt baseline shift.  High background or retention time shifts.  Baseline rise at high temperature.  Extraneous peaks.  Loss of peak resolution.  Peak tailing or splitting.
Remar	ks:	

# QUALITY ASSURANCE REVIEW DATA VALIDATION CHECKLIST Wet Chemistry Data

Project File(s)	F13055, F13066		Sampling Date(s)	4/30/02, 5/1/0	)2
Laboratory	Accutest - New Jerse	ey	Receipt Date(s)	Same or Next	Day
SDG Number	F13055		Matrix	☐ Water	☐ Air
				Soil/Sedia	ment
Sample Identifie	cation Numbers:				
F13055-02	F13055-09	F13055-14	F13066-03		
F13055-03	F13055-10	F13055-15	F13066-04		
F13055-04	F13055-11	F13055-16			
F13055-05	F13055-12	F13055-17			
F13055-06	F13055-13	F13066-02			
Analytica USEPA S	s Waste Remedial A I Data (HAZWRAP D W846 (SW-846) Met Center for Environme	OE/HWP-65/R2 hods	2)		
Parameter TOC	Method Corp Eng 81M	Parameter	Method	<u>Paramete</u>	er <u>Method</u>
duplicate (MS rinsate blank r	parameters were example.  (MSD) results, laborates and laborates and laborates are considered by:	atory control sa	mple (LCS) results, esults, initial and con	method blank	results, field and/or ions, reporting limits

E\*Data, Inc. Wet Chemistry Data Validation Checklist May 2000

# **Validation Summary**



<b>Qualifiers:</b> U - Not detected. R - Unusable.		J - Approximat UJ - Not detect	e data due to othe led, limit of detect	er quality control cation approximate.	riteria.	
I. HOLDIN Yes No □ A □ A The following defi	ll samples	were handled and were extracted and are found:	preserved accord analyzed within	ding to requirem in holding time c	ents. riteria.	
Sample I.D.	Matrix	Preservation	Collection	Extraction	Analysis Date	Qualifier Flag
			Date	Date	Date	riag
AT 10 10 10 10 10 10 10 10 10 10 10 10 10						
			.,,,			
· · · · · · · · · · · · · · · · · · ·						
	ļ					
Remarks:						

E\*Data, Inc. Wet Chemistry Data Validation Checklist May 2000

II.	CALIB	RATIONS (Instrun	ent	al Meth	ods)		
Yes ⊠	No	The initial calibra concentrations plus			ed of	6-point curve bracketing the	expected sample
$\boxtimes$		The correlation coef	ficie	nt for ea	ch analy tions (	te in multipoint calibrations was CCVs) were performed at the	≥ 0.995. e method-specified
$\boxtimes$		The % Recovery fe	or e	ach of t	he CCV	s (bracketing samples) was w	ithin control limits
$\boxtimes$		(90 - 110%). No deficiencies were	e not	ted.			
The fol	llowing d	eficiencies were foun	d:				
Date/ Time	Analy	rte	I / C	Corr Coeff	%R	Affected Samples	Action
			<u> </u>				
			<u> </u>		<u> </u>		
			+		-		
			+		1		
			$\dagger$				
Rema	rks:						
						,	

Yes No	At leas Blanks Field ( No def	thod blanks, calibration at one preparation blank was were reported at the RL for the RL	as prepared wit for all non-detec	h each batc ets.	
riciu QC as		ield Blanks		Equip	oment Rinsate Blanks
The followi	ng contami	nants were detected in blar	nks associated v	with sample	es in this SDG:
Blank ID	Matrix	Compound	Conc	Action Level	Associated Samples
GP15635	Soil	TOC less than RL			
·····					
Remarks:					

IV. LABORA	TORY CO	NTROI	SAMPLE					
	CS recoverie o deficiencie	es were v es were r			sh of sar % for w	nples. vater, or	80 - 120%	for soil).
The following con	npounds fell	outside t	the specified QC	limits:				
LCS ID	Matrix	Comp	ound			%R	Control Limits	Qualifier Flags
				· · · · · · · · · · · · · · · · · · ·				
				·				
LCS Summary:	Unacceptab	le recove	cries for each LC	S analysis i	n the Sl	DG.		
LCS ID GP15		latrix:	Soil	LCS ID			Matrix:	
Spike Recovery	Out of	1	Outside Limits	Spike Reco	very		Out of	Outside Limits
Remarks:								
					<del></del> ,			

Гуре Analysis	<i>A</i>	Analyte		MS Reco	very MSD Recover	MS/MSD QC Limit	s RPD	RPD Limit
								·
		Linacom	otable reco	overies per th	e total number of	matrix spike re	coveries in the	ne fraction
	umma	F13055			Sample ID			
MS/MSD S Sample ID SDG Spike Rec.	F130	F13055	-11 Matrix	Soil ide limits		out of	Matrix	tside limit

by either a positive or negative bias due to deficient recoveries.

VI.	DUPLI	CATE ANALYSES					
Yes ⊠ ⊠	No 	Laboratory duplicate analyses were performed with each sample batch.  RPDs for the laboratory duplicate analyses were within criteria guidelines (<% for water, or <30% for soil).  Field duplicates were associated with this QC batch.  Qualification for field duplicates was attempted.					
Field S	Sample/I	Ouplicate ID:	<u>F13055-14/-17</u>		Matrix: <u>Soil</u>		
Labor	atory Sa	ample/Duplicate ID:	<u>F13055-11</u>		Matrix: Soil		
The rel	lative per duplicate	reent difference (RPD) is e. There are no specific re	calculated for coview criteria for	each positive r or field duplic	esult identified ate analysis co	l in either the mparability.	sample or
	RPD is	calculated using the follo	owing equation	ı:. R	(A+B)		
The fo	ollowing o	deficiencies were found:				mple Result plicate Sampl	e Result
Type Duplicate Con		ite Compou	ınd	Sample Result	Duplicate Result	RPD	Action
Rema							
<u>Labor</u>		plicates were less than RI	. Field duplica	ites were less	than RL.		

Analyte	Reported RL	CRRL	Action

REPORTING LIMITS

VII.

VIII.	SAMPL	E RESULT VERIFICAT	ION (Full Raw Da	ta Package Validation Only)
Yes	No	Calculations for all positive	e hits were verified.	
The fo	llowing di	screpancies were found:		
	Analyte	Reported Value	Recalculated Value	Sample
· · · · · · · · · · · · · · · · · · ·				
	· · · · · · · · · · · · · · · · · · ·			
	arks: ulations w	ere spot-checked.		
		ere spot-checked.		

Appendix C
EDD Verification

Page C-1 of Page C-7

edata\ValidationSpreadsheets.xls

							l	
1 ah Campio ID: F11289-2	F11289-2	F11289-3	F11289-4	F11289-5	F11289-6 F11298-3	F11298-3	F11298-4	F11298-5
	* 004			200	100 CA	MD 30E C 72	10.77 S D27401	MP-10N-S-18-0
Field Sample ID (011-04-): BKGD-S-22'-Q1	BKGD-S-22-01	BKGD-S-43-01	MP-30E-S-18-	-05-0-H05-4E	MF-30E-3-45-	MI-31-5-305-1M	BY 77-0-00-10	
Matrix	C	NOS	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL SOIL SOIL SOIL SOIL
Manila Sampa Tuna		! ? ?	z	6	z	z	z	z
		1000/00/01	1002/22/01	10/22/2001	10/22/2001	10/23/2001	10/23/2001	10/23/2001
Sample Collection Date.	10/2/2/201	10/24/2001	10077701					
orida PRO (mg/Kg)				•	:	i	1 7	97

Appendix C - EDD Verification Summary of Verified EDD Data (CTO#0059 - Albany Round 4 Groundwater)

Field Sample ID (011-04-):	BKGD-S-22-Q1	BKGD-S-43'-Q1	MP-30E-S-18'-	MP-30E-S-30-	MP-30E-5-43-		D-71-0-0549	7-01-9-NOI-LIN
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Type:	Z	Z	z	E.	z		z	Z
Sample Collection Date:	10/22/2001	10/22/2001	10/22/2001	10/22/2001	10/22/2001	10/23/2001	10/23/2001	10/23/2001
Florida PRO (mg/Kg)						!	;	- 077
TPH (C8-C40)	9.1 ∪	11.2=	25.1=	29.9 =	9.1 U	15.8 =	11.7 =	110 =
VOCs (µg/Kg)					;	i	9	1000
Benzene	230 ∩	270 U	2300 U	230 ∩	230 ∩	591 =	000	0 047
Ethylbenzene	13200 =	10700 =	38400 J	15900 J	458 =	5340 =	10100 =	<b>= 0</b> 296
Toltiene	112 J	2180 =	2300 U	118 J	219 J	13000 =	12600 =	240 O
Xylene (total)	= 00068	39700 =	91000 J	38800 J	1550 =	12000 =	= 00662	10100 =
PAHs (ua/Ka)								
Acenanhthene	740 U	710 U	720 U	740 U	700 U	730 U	720 ∩	1870 J
Acenaphthylene	740 U	710 U	720 U	740 ∪	700 U	730 U	720 U	3000 ∩
Arthracene	370 U	350 ∪	370 =	394 =	350 U	J 096	3 <b>60</b> U	2320 =
Benzo(a)anthracene	370 U	320 U	910 =	= 22	320 ∪	∩ 096	360 U	3220=
Benzo(a) Evrene	687.	71.6=	516=	534=	43.9 J	73 U	72 U	1450 =
Benzo(h)filozathene	48.3 J	48.8	= 606	291 =	33.8 J	73 U	72 U	749 =
Benzo(a h i)nendene	74 U	36.3 J	130 =	129=	70 U	73 U	72 U	257 J
Benzo(k)fluoranthene	39.7.1	37.8 J	252 =	246 =	70 U	73 U	72 U	= 0.29
Chasene	370 U	350 U	3250 =	3300 =	350 ∪	360 ∪	09€	3750 ≈
Dibony's hanthracene	7411	71.0	43.9 J	39.9 J	70 C	73 U	72 U	300 U
	235.1	4 14	2320 =	2280 =	242 J	266 J	245 J	12300 ==
Fligged	370 U	350 U	262 J	306	350 U	09€	∩ 09E	1660 =
Indeno(1.2.3.cd)nyrene	74 U	35.2 J	186 =	171 =	10 €	73 U	72 U	351=
1. Methylpsochtbelene	370 []	350 U	09€	370 U	350 ∪	09€	09E	1500 U
- Wediginaphinacie	37011	350 U	360 U	370 ∪	350 U	00€	∩ 09E	1500 U
Z-Ivreu iyii iabi iu iarel re	2000	350 1	360 1	370 U	350 ∪	09€	360 ∪	1500 U
Naproratene	2,75	3.47	1880 =	2040=	153 J	213 J	203 7	10700 =
	; -	920	1040	1004	756	242.1	197.	10200 =
Pyrene	245 )	   000   0	OF SE	100	î,	7 7 7	2	<u>.</u>
Wet Chemistry (mg/Kg)					110011	1.001	110011	1001
Total Organic Carbon	1200 U	1000 U	1100 C	1100 0	0.00.1	0 81.	3	3

Appendix C - EDD Verification Summary of Verified EDD Data (CTO#0059 - Albany Round 4 Groundwater)

			, 000,71	744222 E	E44333 &	E11333.7	F11333.8	F11333-9
Lab Sample ID:	F11298-6	F11333-3	F11333-4	11335-3 140 404 0 43 0	MD-205-6-18-0	MP-20S-S-43-0	MP-20S-S-72-0	MP-10W-S-72-0
Field Sample ID (011-04-):	MP-10N-S-38-0	MP-5N-S-66-C	MP-10W-5-19-0	MIT-IOV-S-CION	NOI-0-077-IM		NOS	SOIL
Matrix:	SOIL	SOIL	30E	SOL T	3 2	! } }	! } Z	; Z
Sample Type:	Z	z	Z	z	Z	2	1000000	7000000
Sample Collection Date:	10/23/2001	10/25/2001	10/25/2001	10/25/2001	10/26/2001	10/26/2001	10/26/2001	10/26/2001
Florida PRO (mg/Kg)							8	1
TPH (C8-C40)	16=	74.1 =	10.5 =	28.6 =	12.4=	8.9 U	= 7.77	12.7
VOCs (µg/Kg)					:		į	
Benzene	34.1 =	2400 ∪	220 U	∩ 0096	240 U	5.6 U	Z2/0 =	4.8 U
Ethylbenzene	120 =	31200 =	2100 =	49300 =	1600 =	5.6 ∪	15800 =	4.8 ∪
Tolliene	3 <del>4</del>	= 00089	220 U	139000 =	240 U	5.6 U	31800 =	4.8 U
Xviene (total)	353 =	112000 =	<b>252</b> J	= 00686	1520 =	17 U	47600 =	14 U
PAHs (ua/Kg)							:	:
Acenaphthene	720 U	740 ∪	710 U	780 U	740 U	710 U	710 0	720 0
Acenanhthviene	720 U	740 U	710 U	780 U	740 U	710 U	710 U	720 O
Authocome	) (1986 (1986)	473 =	350 U	390 ∪	370 U	360 U	360 U	000
Dena/a)anthracene	364	807 =	350 U	390 U	370 U	360 U	360 U	360 U
Denze(a)mace	- 99 - 99 - 99	336=	62.5 J	<b>42.2</b> J	74 U	71 U	40.9 J	<b>83</b> J
Benzo(h)filoranthene	= 1.46	203 =	36.3 J	78 U	74 U	71 U	. 0 <del>4</del>	40.7 J
Benzo(a b ilreplene	36.2.1	86.1 =	71 U	78 U	74 U	71 U	710	72 U
Benzo(k)flioranthene	99	187 =	71 U	78 U	74 U	71 U	34.4 J	35 J
	312.1	1420 =	350 U	390 n	370 U	360 U	360 ∪	720 U
Diberz/a hamthracene	72 U	74 U	71 U	78 U	74 U	71 U	71 0	72 U
	1270=	2930 =	252 J	235 J	370 U	09E	388 =	360 ∪
	] O9E	292 J	350 U	390 U	370 U	360 U	360 ∪	360 U
	404	= 2 26	710	78 U	74 U	71 U	71 U	72 U
Material 1.4.3-54/pyrene	36011	370 U	350 U	390 ∩	370 U	360 U	09€	09€
	360 1	370 U	320 C	390 U	370 U	09€	360 U	360 U
Apartitus de la company de la	360	370 U	320 ∪	06€	370 U	360 U	360 ∪	09E
	) H	= 02.00	320 0	390 U	370 U	09€	294	09€
Prientingle	1090	2450 =	240 J	193 J	370 U	360 U	302 J	174 J
Wet Chemistry (ma/Ka)								
Total Organic Carbon	110011	1100 U	1100 U	1200 U	1100 U	1100 U	1100 U	1100 U
Local College								

Appendix C - EDD Verification Summary of Verified EDD Data (CTO#0059 - Albany Round 4 Groundwater)

		2,07,7	140470 4	E42478.5	E12178-6	F12178-7	F12178-8	F12178-9
Lab Sample ID:	F121/6-2	MD 40W S.43'-	MP-10W-S-72	MP-05N-S-18'-	MP-05N-S-38'-	MP-05N-S-66'-	MP-30E-S-18'-	MP-30E-S-43'-
Fleid Sample ID (UTT-04-)	- 01-0-1001-JMI	IOS IIOS		SOIL	SOIL	SOIL	SOIL	SOIL
Matrix	200	5 2	i 5 2	2	z	z	z	Z
Sample Type:	N 1/30/2002	N 1/30/2002	1/30/2002	1/30/2002	1/30/2002	1/30/2002	1/30/2002	1/30/2002
Florida PRO (mg/Kg)	707/00/1							
TPH (C8-C40)	16.1 U	10.3 U	14.9 U	936 =	67.3 U	8.6 U	40.9 U	23.8 U
VOCs (µg/Kg)					- (	1 000	2000	11020
Benzene	290 U	॥ ଉ`ଉ	120 7	2500 U	3.6 J	000	7400	007
Ethylbenzene	10700 =	15.5 =	205 J	46100 =	19.9=	313=	13600 =	103 )
Tollane	290 U	73.1 =	682 =	2500 U	38 =	1170 =	2400 ∪	94.2 J
Xviene (total)	7040 =	54.4=	436 J	64800 =	101 =	703 J	168000 =	238 J
PAHs (µg/Kg)					,	;	-	1200
Acenaphthene	062	089	720 U	20400 J	709 J	720 N	00/	000
Acenaphthylene	790 U	089 n	720 U	31000 U	1500 U	720 U	_ 200 ←	730 U
Action	300	340 ∪	360 U	27700 J	1050 =	360 U	350 U	360 U
	161	340 □	360 U	30200 J	1310 =	360 ∪	350 U	360 U
Denzo(a)anun acene	2 2 2	555.1	69.6 1	13000 J	528 =	72 U	63.8 J	60.4 J
Denzo(k)@.ozadbere	544.1	48.5 J	52.7 J	7260 J	319=	72 U	45.4 J	43.3 J
	1 62	∩ 89	72 U	3050 J	132 J	72 U	70 U	73 U
Delizo(y,ii,i)perylene	423.1	445	49.8 J	6170 J	267 =	72 U	41.6 J	42.5 J
Chambre Chambre	2 6	340 U	360 U	17400 J	772 =	09E	320 U	360 U
Circulation by anthroposes	1 62	189	72 U	913 J	150 U	72 U	_0 07	73 U
	448 =	340 U	271 J	119000 J	4930 =	204 )	320 U	360 U
	390 [	340 C	360 U	17400 J	670 J	360 U	320 U	360 U
	11 62	∩ 89	72 U	3460 J	155=	72 U	70 U	73 U
indeno(1,2,3-cd/pyrene	300	340 U	09€	16000 U	730 U	360 U	350 U	360 U
Calved by the particular of the calved to th	390	340 1	360 U	7920 J	730 U	360 ∪	350 U	360 U
Z-ivieuryinapinulalei le	1066	340 (	360 U	16000 U	730 U	09€	350 U	360 U
	352	340	360 U	106000 J	4180 =	360 U	350 U	3 <b>60</b> U
Prenantirene		178 J	263 J	92900	3800 =	168 J	350 U	360 U
	2							
Wet Chemistry (mg/hg)	110077	10077	5	1560 =	1100 11	1100 U	1100 U	1100 U
Total Organic Carbon	0.001	3	2					

Appendix C - EDD Verification Summary of Verified EDD Data (CTO#0059 - Albany Round 4 Groundwater)

		0.70007	7,000,4	E42224 E	E12221-6	F12221-7	F12221-8	F12221-9
Lab Sample ID:	F12221-2	F12221-3	F122214	RKGD-S-77-02	MP-20S-S-18'-	MP-20S-S-43'-	MP-20S-S-72-	MP-20S-S-100'
Field Sample ID (011-04-):	MP-30E-3-/2-	50-52-5-05VB	15-05-05-05-05-05-05-05-05-05-05-05-05-05	IIOS		SOIL	SOIL	SOIL
Matrix:	J :	JOE 1	200	2	! } z	z	z	z
Sample Type:	Z S	2 000	N	2/4/2002	2/4/2002	2/4/2002	2/4/2002	2/4/2002
Sample Collection Date:	2/4/2002	2/4/2002	7007#17	700717				
Florida PRO (mg/Kg)			ļ	1077	9	00	1178	n 6
TPH (C8-C40)	7.41 J	8.53 J	17.5 =	14.3 II	n D	0000	ò	)
VOCs (µg/Kg)			;	-	200		7.711	5211
Benzene	5.5 U	270 U	250 U	790 0	0 000	0.4.0	) - ;	9 6
Ethylbenzene	4.7 J	413=	7310 =	3700 =	7210 =	21.1 =	J.1	C 6.7
Tolliene	11.3 =	270 U	3860 =	6740 =	230 U	5.2 U	6.1 =	5.2 U
Xylene (total)	15.2 J	1560 =	21600 =	11400 =	5270 =	19.3 =	5.7 J	٦ 8
PAHs (µg/Kg)					:		900	1007
Acenaphthene	700 U	∩ 00 <i>L</i>	780 ∪	700 700 700	770 U	710 U	0.060	0 07/
Acenaphthylene	700 U	700 U	780 ∪	700 U	770 U	710 U	O 069	0 02.7
Arthropone	350 U	350 U	390 ח	350 U	380 U	360 U	340 U	⊃ 960 ∩
	350 U	320 N	390 U	221 J	380 U	360 U	340 U	360 U
	11 02	83.2=	82.3 =	116=	0 <i>L</i>	71 U	∩ 69	72 N
Delizo(a)pyletre	2 2	53.1 J	61.8	94.6 =	77 U	71 U	∩ 69	72 U
	2 5	7698	43.6 J	62.3 J	U 77	71 U	∩ 69	72 N
Belizo(g,ii,)peryierie	2 5	42.1.1	45.8 J	85.1 =	0 <i>L</i> L	71 U	∩ 69	72 U
Derizo(k)moraninene Characa	35011	350 U	∩ 06E	248 J	380 U	09€	340 ∪	360 U
	2 25	2 5	78.0	70 U	77 U	71 U	∩ 69	72 N
	180	340.1	358	761 =	380 U	360 U	340 ∪	3 <del>6</del> 0 U
	350 1	350 []	3000	350 ∪	380 ∪	360 U	340 ∪	3 <del>6</del> 0 U
	2 5	37.1	78.0	40.6 J	77 U	71 U	∩ 69	72 U
ingeno(1,2,3-cg/pyrerie	35011	350 []	06E	350 ∪	380 U	360 U	340 ∪	360 U
I-methylnaphuhalene	350 1	350 11	3000	350 U	380 ∪	360 U	340 ∪	360 U
z-memyinaphunaiene	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	350	300	350 U	380 U	09€	340 ∪	360 U
Naphthalene	0000	) - 0 (1)	- EGE	. F83	380 U	360 U	340 ∪	09€
Phenanthrene	54.	r 007	200	3 6	11 080	36011	340 [	360 13
Pyrene	139 J	799 J	306.	= 719	0 000	96	}	
Wet Chemistry (mg/Kg)				•	110001	110077	110011	1001
Total Organic Carbon	1100 U	1100 U	1200 U	1100 0	0 0071	3	-	

Appendix C - EDD Verification Summary of Verified EDD Data (CTO#0059 - Albany Round 4 Groundwater)

			740055	E4 20EE 42	E13055.14	F13055-15	F13055-16	F13055-17
Lab Sample ID:	F13055-10	F13055-11	F13055-12	F15035-13	MP-10W-S-18'-	MP-10W-S-43'-	MP-10W-S-72'-	MP-FD2-S-100
Field Sample ID (011-04-):	MP-FD1-S-100	-01-9-NGO-4W	- 00-0-NICO-LIM	100 III			NOS.	SOIL
Matrix:	SOIL	SOIL	SOF	SOIL 1	305	2	!   Z	<u>:</u>
Sample Type:	Z	Z	Z	z	z	2	2 9	- 0000
Sample Collection Date:	4/30/2002	4/30/2002	4/30/2002	4/30/2002	4/30/2002	4/30/2002	4/30/2002	4/30/2002
Florida PRO (mg/Kg)					•	ţ	9	4 4 4
TPH (C8-C40)	21.5 =	23.9 =	19.5 =	20.6 =	14.6 =	ر /9/	= C.67	10.4
VOCs (µg/Kg)				1.00	11020	11.2	8700 =	D 0062
Benzene	300 N	260 ∪	6.2 U	5460 = 0460	7007	0.0	- 0015	63300 1
Ethylbenzene	300 n	225 J	11.8=	31500 =	2000	9.5	= 00/66	570079
Toluene	300 ∩	260 U	6.4 =	121000 =	187 J	31.4 =	= 220000	2900 0
Xylene (total)	O 006	770 U	14.6 J	74000 =	7640 J	24.5 =	127000 =	53600 J
PAHs (µg/Kg)					:		1002	11 052
Acenaphthene	268 J	1430 =	720 N	710 0	700	9 1	7007	2002
Acenaphthylene	710 U	750 U	720 U	710 U	710 U	00 C	0.027	0.00
Arthracene	279 کا	736 J	298 J	164 J	3 <del>2</del> 0 U	350 U	230 )	370 U
Denzo(a)anthracene	324.J	210 J	426 =	305 J	47.4	73.1 J	349 J	45.7 J
	147 =	116=	190 =	135 =	71 U	70 U	173=	73 U
Derizo(a)pyrene Benzo(b)triographene	= 6	68.5 J	125=	91.4=	71 U	70 U	105=	73 N
Derizo(z.) inconfere	1. 697	31.7 J	73.9=	48.8 J	71 U	70 U	46.2 J	73 U
Derizo(g,n,j)peryene	8.00 = 0.00	50.7.0	108 =	80.4 =	71 U	70 U	83.8=	73 U
Benzo(k)iluoraninelle Chamana	308	248.1	= 69E	292 J	350 U	350 U	420 =	370 U
Oilon-(a h)outhrooms	2225	75 U	72 U	71 U	71 U	70 U	72 N	73 U
	1380 =	619=	1670 =	= 896	120 J	254 J	1210 =	113 J
	272.1	1040 =	234 J	99.3 J	350 U	320 ∩	141 J	370 U
Indexo(1.0.3.cd)pyrene	434.1	37.9 J	55.9 J	35.8 J	710	70 U	40.2 J	73 U
Inde io( 1, z, J-cu)pyrene	3601	187.	360 U	350 U	350 U	320 U	360 U	370 U
	360 11	74011	360 U	350 U	350 U	320 ∩	360 ∪	370 U
	360 11	370 U	360 U	350 U	350 U	350 U	360 ∪	370 U
	14004	= 0900	1500 =	749 =	82 J	155 J	1000=	85.7 J
Phenanthrene	1400 =	547 =	1430=	# 808   808	102 J	224 J	1040 =	96.3 J
Pyrene	11/0=	# / LC	1 05	1 070	2	: 	!	
Wet Chemistry (mg/Kg)				9	2.00	1001	110011	1100 U
Total Organic Carbon	1100 U	1100 0	1100 0	0.361	3	2	, , , , , ,	

Appendix C - EDD Verification Summary of Verified EDD Data (CTO#0059 - Albany Round 4 Groundwater)

Lab Sample ID: Field Sample ID (011-04-): E Matrix:	F13055-2	13055.3	4.00		2	3		
	1 2000-	2332		100 000	140 30E G 43	MD 20F S.77.	MP_20S_S-18'-	MP-30E-S-43'-
	BKGD-S-22-03	BKGD-S-43'-Q3	BKGD-S-72-03	MP-30E-3-18-	MP-50E-0-40-	- 77-9-305-JIM	-01-0-07- JM	
*Y13814	C.	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
1 ,	5 :	2	2	z	z	9	Z	z
Sample Type:	Z	2		70000	100000	4730/2002	5/1/2002	5/1/2002
Sample Collection Date:	4/29/2002	4/29/2002	4/29/2002	4/29/2002	4/23/2002	4,30/2002	3115005	
Florida PRO (mg/Kg)					,	7	- 000	110
TPH (C8-C40)	11.9=	9.1 U	81.8 =	25.4 =	10.4 =	 1.	8.32.5	9
VOCs (µg/Kg)			:			11.000	11090	=
Benzene	290 U	360 U	2600 U	300	6.4 O 4.0	330.0	0 000	5 6
Ethylpenzene	15600 =	2020 =	+4400	= 161	6.4 ∪	324 J	13300 =	= 47
	290 U	290 J	72000 =	124 J	2.9 J	594 =	260 U	0 9
Volume   V	41600 =	= 0628	147000 =	499 J	19 U	92 <del>0</del> J	10300 =	39.7 =
PAHS (ua/Ka)						:		i G
Acceptations	730 U	O 089	∩ 069	1340 =	∩ 069		740 U	0 02/
	1.05.7	1089	O69	740 U	∩ 069	200 €	740 U	720 U
Acenaprimyrene	5 5 5	340 1	320 0	249 J	350 U	350 ∪	370 U	360 U
Anthracene	9 6	340 5	350	225.1	167 J	113 J	370 ∪	09E
Benzo(a)amthracene	(3.5)	3	2 23	- F	83.5 =	51.5	74 U	72 U
Benzo(a)pyrene	) 	8 8	9 8	- 257	643	367.	74 U	72 U
Benzo(b)fluoranthene	73 U	28	2 3	, i	7 7 7	) 	7411	12 11
Benzo(g,h,i)perylene	73 U	∩ 89	∩ 89	37.55	J 7. 74	2 6	2 5	2 5
Benzo(k)fluoranthene	73 U	∩ 89	∩ 69	62.5 )	56.6 J	9	4	7.70
Christin	109 J	340 ∪	350 ∪	187 J	162 J	133	370 U	n :
Oihona(a h)anthracene	73.0	089	∩ 69	74 U	∩ 69	70 C	74 0	720
	801	102	108 J	= 289	574 =	404 =	370 U	360 U
	1096	340 [	350 ∪	1040 =	350 ∪	350 U	370 U	360 U
	233	; == 82	∩ 69	44.3 J	∩ 69	20 0	74 U	72 N
Indeno(1,2,3-cd)pyrene	1 096	3401	350 U	156 J	350 U	350 U	370 U	360 ∪
1-Metnyinaphthalene	0 200	1000	350 11	740 U	350 ∪	350 ∪	370 ∪	360 U
2-Methylnaphthalene	0 1	2 6	2000	37011	350	350 U	370 U	09€
Naphthalene	360 U	340 0	0 000	00/6	9 - 69	300	37011	360 U
Phenanthrene	161 J	19 5	107 J	= 0/12	= 75c	- 780	3 6	
Pyrene	170 J	88.9 J	90.1 ງ	574=	487 =	343	3/0 0	0.006
Wet Chemistry (mg/Kg)		;		11 0077	2.00	10011	110011	1100 U
Total Organic Carbon	1100 C	1100 U	1100 0	0811	2	2	28	

220404403	01116CSS02	SOIL SOIL	z	5/10/2002		ı		1	1	ł	1		0.6 ∪	0.6 ∪	4	36.7 =	169 =	61.7 =	63.7 =	27.3 =	<b>43</b> =	23.8 =	112=	0.6 U	70.3 =	6.6 U	9:9 0:9:0	6.6 U	0.6 U	86.1 ==	ı
220404402	01116CSS01	SOIL	z	5/10/2002		ı		i	ŀ	:	ı		6.7 ∪	6.7 ∪	6.7 ∪	= 6.71	137 =	18.3 =	22.1 =	6.5 J	16.2 =	0.7 U	40.4 =	6.7 U	15.1 =	6.7 U	6.7 U	6.7 U	9.7 =	18.4 =	i
F13066-4	Ŕ		z	5/1/2002		10.3 =		280 U	157 J	<b>404</b>	367 J		710 U	710 U	09€	64.3 J	71 U	71 U	71 U	71 U	00€	710	212 J	09E	71 U	360 ∪	360 U	360 U	160 J	167 J	1001
Lab Sample ID:			Sample Type:	Sample Collection Date:	Florida PRO (mg/Kg)	TPH (C8-C40)	VOCs (µg/Kg)	Benzene	Ethylbenzene	Toluene	Xyiene (total)	PAHs (µg/Kg)	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a.h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	Wet Chemistry (mg/Kg)

# Appendix G

**Contractor Production Reports and Contractor Quality Control Records** 

		CONTRACTO (Attach Add		JCTION RE					1/29/02 Monday
Contract No.		CTO No.	Location	.,•		Project No		Report No	
N62467-98-D-09	995	011	N.	AS Whitir	ng Field		151168		001
Contractor: CF	H2M	I HILL Constr	uctors, I	nc.		Superinter	ndent: Terry	McElve	en
AM Weather		PM Weather		Precipitation	1	Max Temp		Min Temp	
Clear		Clear		0"		84°F		73°F	
				1	•	· · · · · · · · · · · · · · · · · · ·	CCI Hours Worked	Today	27.5
	Was	s A Job Safety Meetir	ng Held This	Date?	✓ Yes	☐ No	Subcontractor Hrs V	Vorked Today	19
							Total Site Hours Wo	rked Today	46.5
	i Hours ous Report.	0							
Was Trenching/Scaffold/F (If Yes, attach statement or checklist s			ne?		☐ Yes	⊠ No	Cumulative Total of From Start Of Cons		46.5
Was Hazardous Material/ (If Yes, attach description of incident a			Environment	?	☐ Yes	⊠ No	Have Safety Require Met?	ements Been	⊠ Yes
List Safety Actions Taken	This	Date/Safety Inspection	ns Conduct	ed.			* .		
Safety meeting w	ith a	all personnel,	verified	that every	one had	reviewe	ed and signed	l safety p	olan.
Discussed specifi	cs fo	or this task and	d verifie	d that all	required	safety e	quipment is o	on site ar	nd available
for use.									
Equipment/Material	Rece	eived This Date to	he Incorr	orated in Id	sh.			•	

- 1 Truck mounted DPT rig (Kelly Drilling)
- 1 Site work truck (Kelly Drilling)
- 1 Site equipment trailer (Kelly Drilling)
- 1 Site work truck (CH2M Hill)

Level B equipment for use if necessary (CH2M Hill, Kelly Drilling)

1 – POV (CH2M Hill)

### Construction and Plant Equipment on Job Site, including Number of Hours Used, This Date.

- 1 Site Pickup CH2M Hill 12 Hrs
- 1 POV CH2M Hill 12 Hrs
- 1 Truck Mounted DTP rig Kelly Drilling 6 Hrs
- 1 Site Truck Kelly Drilling 8 Hrs
- 1 Site Trailer (water/pressure washer) Kelly 8 Hrs

Work Force: Name, Location or Description	<u>Employer</u>	Number	<u>Trade</u>	Hrs
Terry McElveen	CH2MHill/CCI	1	SSup	12
Ryan Bitely	CH2M Hill	1	QAQC	12.5
Bobby Kelly	Kelly Drilling	1	Sup	9.5
Reggie Jackson	Kelly Drilling	1	Tech	9.5

## Work Performed This Date & Remarks:

#### Site 4

Mobilization/Site Setup – Personnel and equipment mobilized to site this morning, Kelly set up
equipment decon adjacent to site 4, obtained water for portable tank in trailer. Received and
inspected breathing air equipment in case PPE upgrade is necessary. Received and calibrated air
monitoring equipment.

CPR04-29-02.DOC PAGE 1 OF 2

# • Soil Sampling

Began this sample event by with the background sample, total depth of 72′, 3 samples obtained at shallow, intermediate and deep locations within well.

Obtained shallow and intermediate samples from location adjacent to 30E to depth of 42′. Total of 5 samples today and total depth of 114 ft.

Terry McElveen 4/29/02

Terry McElveen

Contractors Superintendent

Date

	CONTRACTO	R PRODI	ICTION RE	PORT			2 /	1/20/02	
			ets If Necessar				1 _	1/30/02 Face 1	
Contract No.	CTO No.	Location		'11	Project No		Pay: Tuesday Report No.		
N62467-98-D-0995	011		AS Whiti	na Fiold	Project No				
			AS Whitir	ig rieiu		151168	<u> </u>	002	
Contractor: CH2N	M HILL Constr	uctors, L	nc.		Superintendent: Terry McElveen			en	
AM Weather	PM Weather	Precipitation		n	Max Temp	)	Min Temp		
Clear	Clear	1	0"		86°F		74°F		
						CCI Hours Worked 1		25	
Wa	as A Job Safety Meeting Held This Date?			✓ Yes	☐ No	Subcontractor Hrs Worked Today			
						Total Site Hours Wo		46	
Wer	Were There Any Lost Time Accidents This Date?			☐ Yes	⊠ No	Cumulative Total Of Hours Worked From Previous Report.		46.5	
Was Trenching/Scaffold/HV Ele (If Yes, attach statement or checklist showing in	ectrical/High Work Dornspection performed)	ne?		☐ Yes	⊠ No	Cumulative Total of Hours Worked From Start Of Construction.		92.5	
Was Hazardous Material/Waste (If Yee, attach description of incident and propo	osed action)			☐ Yes	⊠ No	Have Safety Require Met?	ments Been	⊠ Yes	
List Safety Actions Taken This [									
Safety meeting with a performed today, hea	ıll personnel. I at stress – keep	Discusse sing hyd	ed the AH rated/co	IA/Pre-T ol.	ask safe	ty checklist fo	or opera	tions to be	
Equipment/Material Rece									
N/A									
Construction and Plant	Equipment on '	lob Site. i	ncluding l	Vumber o	f Hours l	Used This Date			
1 – Site Pickup – CH2	M Hill – 12 H	rs		<b>V4111001</b> 0	I I I Oui o	Docu, IIIIo Dan	<u>=-</u>		

- 1 POV CH2M Hill 12 Hrs
- 1 Truck Mounted DTP rig Kelly Drilling 10 Hrs
- 1 Site Truck Kelly Drilling 10 Hrs
- 1 Site Trailer (water/pressure washer) Kelly 10 Hrs

Iill/CCI			
·····/ CC1	1	SSup	13
/ Hill	1	QAQC	12.5
Drilling	1	Sup	10.5
Drilling	1	Tech	10.5
	0		

### Site 4

### Soil Sampling

Continued obtaining soil samples adjacent to the monitoring point locations for each well today. Today's progress:

Well #30E – obtained 1 deep sample (72')

Well #5N - obtained 3 samples - shallow, med. and deep samples (total of 72')

Well #10W - obtained 3 samples - shallow, med. and deep samples (total of 72')

Delivered samples from both days to fedex for shipment to lab.

Te	rry	McElveen	4/30/02	
Terry McElveen	Contra	ctors Superintendent	Date	

	CONTRACTOR PRODUCTION REPORT  (Attach Additional Sheets If Necessary)								
Contract No.	CTO No.	Location			Project No				
N62467-98-D-099	98-D-0995 011 NAS Whiting Field			ng Field		151168		03	
Contractor: CH	2M HILL Constr	ructors, I	nc.		Superinten	dent: Terry	McElvee	n	
AM Weather	PM Weather		Precipitation	1	Max Temp		Min Temp		
Clear	Clear		0"		83°F		71°F		
						CCI Hours Worked	Гoday	24	
	Was A Job Safety Meeting Held This Date?			Yes	☐ No	Subcontractor Hrs V	Vorked Today	20	
					Total Site Hours Worked Today		44		
	Were There Any Lost Time Accidents This Date?				⊠ No	Cumulative Total Of Hours Worked From Previous Report.		92.5	
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist sho		one?		☐ Yes	⊠ No	Cumulative Total of Hours Worked From Start Of Construction.		136.5	
Was Hazardous Material/W (If Yes, attach description of incident and		Environment	?	☐ Yes	⊠ No	Have Safety Requirements Been Met?		⊠ Yes	
List Safety Actions Taken T	nis Date/Safety Inspection	ons Conduct	ed.						
Safety meeting wit	h all personnel,	discusse	d hearing	protecti	on, heat	stress, variou	ıs enviror	ımental	
hazards.	-								
Equipment/Material F	eceived This Date t	o be Incorp	orated in J	ob.					
N/A									
Construction and Pl	= =		including l	Number o	of Hours	Used, This Dat	<u>e.</u>		

- 1 Site Pickup CH2M Hill 12 Hrs
- 1 POV CH2M Hill 12 Hrs
- 1 Truck Mounted DTP rig Kelly Drilling 10 Hrs
- 1 Site Truck Kelly Drilling 10 Hrs
- 1 Site Trailer (water/pressure washer) Kelly 10 Hrs

Work Force: Name, Location or Description	<u>Employer</u>	Number	<u>Trade</u>	<u>Hrs</u>	
Terry McElveen	CH2MHill/CCI	1	SSup	12	
Ryan Bitely	CH2M Hill	1	QAQC	12	
Bobby Kelly	Kelly Drilling	1	Sup	10	
Reggie Jackson	Kelly Drilling	1	Tech	10	

# Site 4

#### Soil Sampling

Completed soil sampling activities today. Sampled well #20S, 3 samples taken to total depth of 72′. We did have one snag today, the DPT rod drifted a little at during the last push and drifted into the deep well at cluster 20S. We think we may have damaged the casing at the bottom 1′-2′ of this well. We will close the bottom section of the borehole with pebbles so that we do not load the bottom of well with bentonite.

#### Well screen adjustment

We utilized the DPT rig to aid in lowering the screens in all five SRS wells to their lowest position. This activity was completed today, all screens were lowered either to their lowest position (72') or as low as they could be moved, no problems encountered during this activity.

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## **Demobilization**

Kelly drilling completed activities required of them and demobilized from project. They deconned all equipment prior to leaving and removed decon pad. All decon fluids were contained in the on site storage tank.

Terry McElveen 5/01/02

Terry McElveen

Contractors Superintendent

Date

		CONTRACTO (Attach Add		JCTION RE				_	02/02 hursday	
Contract No.		CTO No.	Location			Project No	).	Report No.	<u></u>	
N62467-98-D-09	95	011	N/	AS Whitir	ng Field		151168	1 '	004	
Contractor: CI-	12M	HILL Constr	uctors, l	nc.		Superinter	ndent: Terry	McElvee	n	
AM Weather		PM Weather Precipitation		1	Max Temp	)	Min Temp			
Clear		Clear		0″		83°F		71°F		
	Was A Job Safety Meeting Held This Date?						CCI Hours Worked	Today	18	
				Date?	Yes	☐ No	Subcontractor Hrs V	Vorked Today	0	
						Total Site Hours Worked Today		18		
Were There Any Lost Time Accidents This Date?					☐ Yes	⊠ No	Cumulative Total Of Worked From Previo		136.5	
Was Trenching/Scaffold/HV Electrical/High Work Done? (If Yes, attach statement or checklist showing inspection performed)				☐ Yes	⊠ No	Cumulative Total of Hours Worked From Start Of Construction.		154.5		
Was Hazardous Material/V (N Yes, attach description of incident an	Vaste nd propor	Released Into The E	Environment'	?	☐ Yes	⊠ No	Have Safety Requirements Been Met?		⊠ Yes	
List Safety Actions Taken Safety between m gases/vapors from Equipment/Material	ysel n w	f and Ryan, d ells to possibl	iscussed y preven	replacen it PPE up	grade.	RS units	, methods of 1	minimizir	g release of	
N/A						- <del> </del>				
Construction and P				ncluding l	Number c	of Hours	Used, This Dat	<u>e.</u>		
1 – Site Pickup – C			rs							
1 – POV – CH2M	Hill	– 12 Hrs								
\$46 - J. P.										

Work Force: Name, Location or Description	Employer	Number	Trade	Hrs
Terry McElveen	CH2MHill/CCI	1	SSup	8
Ryan Bitely	CH2M Hill	1	QAQC	10
		-		
		1		

### Site 4

# Well screen adjustment

The adjustment of the screens was completed yesterday, today Ryan and I replaced the SRS units on the wells. Unit #3 is still out of service (being repaired) and we had problems with unit #2, the fans did not want to run. We had one of the two fans in the blower operating when I left site.

 Demobilization – I demobilized from site, Ryan and Beth will return to sample the wells on Monday

Te	rry	McElveen	5/03/02	
Terry McElveen	Contra	ctors Superintendent	Date	

CONTRACTOR PRODUCTION REPORT (Attach Additional Sheets If Necessary)									Date: 5/03/02 Day: Friday	
Contract No.	CTO No.	Location			Project No	).	Repor	t No.		
N62467-98-D-09	95 011	N.	AS Whitir	g Field		151168		005	5	
Contractor: CI	12M HILL Const	ructors, I	nc.		Superinter	ndent: Te	ггу МсЕ	lveen		
AM Weather	PM Weather		Precipitation	1	Max Temp	)	Min To	Min Temp		
Clear	Clear		0"		83°F		71°	71°F		
	1					CCI Hours Worked Today			4	
	Was A Job Safety Meet	ing Held This	s Date?	☐ Yes	⊠ No	Subcontractor I	Hrs Worked Today		0	
						Total Site Hours Worked To		day	4	
	Were There Any Lost Ti	Vere There Any Lost Time Accidents This Date? Yes No Cumulative Total Complete There Any Lost Time Accidents This Date? Yes No Worked From Pres							154.5	
Was Trenching/Scaffold/HV Electrical/High Work Done?  (If Yes, attach statement or checklist showing inspection performed)					⊠ No	Cumulative Tot From Start Of C		orked	158.5	
Was Hazardous Material/Waste Released Into The Environment?  (If Yes, attach description of incident and proposed action)  Have Safety Requi						quirements E	Been	⊠ Yes		
List Safety Actions Taken This Date/Safety Inspections Conducted.  Ryan Bitely on site chasing down excavation permit for the excavations at sites 6, 16, and 38.										
Equipment/Material N/A	Received This Date t	o be Incor	porated in Jo	<u>ob.</u>					, , , , , ,	
Construction and Plant Equipment on Job Site, including Number of Hours Used, This Date.  1 – POV – CH2M Hill – 4 Hrs										
		Job Site,	including l	Number (	of Hours	Used, This	<u>Date.</u>			
1 – POV – CH2M			including l	Number	of Hours		Date.	Trade	e Hrs	
1 – POV – CH2M	Hill – 4 Hrs		including l		,	<u>er</u>		Track SSup		
1 – POV – CH2M Work For	Hill – 4 Hrs		including l		Employ	er 1/CCI	Number	i	p 0	
1 - POV - CH2M  Work For  Terry McElveen	Hill – 4 Hrs		including l		Employ H2MHil	er 1/CCI	Number 1	SSup	p 0	
1 - POV - CH2M  Work For  Terry McElveen	Hill – 4 Hrs		including l		Employ H2MHil	er 1/CCI	Number 1	SSup	p 0	
1 - POV - CH2M  Work For  Terry McElveen	Hill – 4 Hrs		including l		Employ H2MHil	er 1/CCI	Number 1	SSup	p 0	
Work For Terry McElveen Ryan Bitely  Work Performed Site 4  No work performed Sites 6, 16, and 38	Hill – 4 Hrs	narks:		C.	Employ H2MHil CH2M	er 1/CCI Hill t week.	Number 1 1	SSur	p 0 QC 4	
Work For Terry McElveen Ryan Bitely  Work Performed Site 4  No work performed Sites 6, 16, and 38	Hill – 4 Hrs  This Date & Ren  Transported at site 4 to	narks:		C.	Employ H2MHil CH2M	er 1/CCI Hill	Number 1 1	SSur	p 0 QC 4	

· ·	CONTRACTOR PRODUCTION REPORT (Attach Additional Sheets If Necessary)									
	<del></del>	- turn	ecessary) ————————————————————————————————————	Γ		Day		urda	ı <b>y</b>	
Contract No.	CTO No.	Location		Project No		Repor		_		
N62467-98-D-099	95 011	NAS V	Vhiting Field		151168		000	6	<del></del>	
Contractor: CH	I2M HILL Constr	uctors, Inc.		Superinter	ndent: Te	rry McE	lveen			
AM Weather	PM Weather		ipitation	Max Temp	Max Temp		emp			
N/A	N/A	0"		N/A		N/A	A			
					CCI Hours Wo	rked Today			0	
	Was A Job Safety Meeting	ng Held This Date?	Yes 🗌 Yes	⊠ No	Subcontractor	Hrs Worked T	oday		0	
					Total Site Hour	s Worked Too	lay		0	
	Were There Any Lost Tin	Date?	⊠ No	Cumulative Tol Worked From F		ort.	15	58.5		
Was Trenching/Scaffold/HV Electrical/High Work Done? (If Yes, attach statement or checklist showing inspection performed)				⊠ No	Cumulative Tol From Start Of C		orked	15	58.5	
Was Hazardous Material/W (N Yes, attach description of incident and	☐ Yes	⊠ No	Have Safety Re Met?	equirements E	Been	×	Yes			
List Safety Actions Taken T N/A	his Date/Safety Inspection	ns Conducted.								
Equipment/Material I	Received This Date to	be Incorporate	ed in Job.							
Construction and Pl N/A	ant Equipment on	<u>Job Site, inclu</u>	ding Number o	of Hours	Used, This	<u>Date.</u>				
Work Ford	ce: Name, Location or D	<u>escription</u>		Employ	er	Number	Trad	le	Hrs	
Terry McElveen			C	H2MHil	1/CCI	1	SSu	p	0	
Ryan Bitely				CH2M	Hill	1	QAÇ	QC	0	
10-11-11-11-11-11-11-11-11-11-11-11-11-1										
Sites 6, 16, and 38	This Date & Remormed at site 4 too	day	•				<u> </u>			
			T	erry	McEl	veen	5/04	/02		

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Terry McElveen

Contractors Superintendent

Date

	CONTRACTO (Attach Add		JCTION RE					Date: 5/05/02 Day: Sunday	
Contract No.	CTO No.	Location			Project No		Repor	t No.	-
N62467-98-D-0995	011	N.	AS Whitir	ng Field		151168		007	
Contractor: CH2N	M HILL Constr	ructors, I	nc.		Superinter	ndent: Te	rry McE	lveen	
AM Weather	PM Weather		Precipitation	1	Max Temp	)	Min To	emp	
N/A	N/A		0"		N/A		N/	A	
			•		<del> </del>	CCI Hours Wor	ked Today		0
l Wa	as A Job Safety Meeti	ng Held This	Date?	☐ Yes	⊠ No	Subcontractor I	trs Worked T	oday	0
						Total Site Hour	s Worked Too	day	0
We	ere There Any Lost Tir	me Accident	s This Date?	☐ Yes	⊠ No	Cumulative Tot Worked From F		ort.	158.5
Was Trenching/Scaffold/HV Electrical/High Work Done? (If Yes, attach statement or checklist showing inspection performed)				☐ Yes	⊠ No	Cumulative Tot From Start Of C		/orked	158.5
Was Hazardous Material/Waste Released Into The Environment? (If Yes, attach description of incident and proposed action)					⊠ No	Have Safety Re Met?	quirements E	3 <del>ee</del> n	⊠ Yes
List Safety Actions Taken This N/A	Date/Safety Inspection	ons Conduct	<u>ed.</u>						
Equipment/Material Rec	eived This Date to	o be Incor	oorated in Jo	<u>ob.</u>					
Construction and Plan	t Equipment on	Job Site,	including l	Number (	of Hours	Used, This l	<u>Date.</u>		
Work Force:	Name, Location or D	escription			Employ	<u>er</u>	<u>Number</u>	Trade	Hrs
Terry McElveen				C	H2MHil	l/CCI	1	SSup	0
Ryan Bitely					CH2M	Hill	1	QAQC	0
		<u></u>							
Work Performed The Site 4  No work performance  Sites 6, 16, and 38  No work performance  No work performance	ned at site 4 to	day	ıy.	··					
			Ter	Try McElveen	<del></del>	MCE13		5/05/02 Date	

CPR05-05-02.DOC PAGE 1 OF 1

CONTRACTOR PRODUCTION REPORT (Attach Additional Sheets If Necessary)								06/02 Ionday
Contract No.	CTO No.	Location			Project No	).	Day: No.	ionay
N62467-98-D-09	95 011	N/	AS Whitin	ng Field	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	151168	·	008
Contractor: CF	12M HILL Constr				Superinter	ndent: Terry	McElvee	n
AM Weather	PM Weather		Precipitation	)	Max Temp	)	Min Temp	***
Partly Cloudy	Partly Cloud	$oldsymbol{y}$	0"		83°F		69°F	
						CCI Hours Worked	Today	10
	Was A Job Safety Meeti	ng Held This	Date?	☐ Yes	⊠ No	Subcontractor Hrs Worked Today		8
						Total Site Hours Worked Today		18
	Were There Any Lost Time Accidents This Date?			☐ Yes	⊠ No	Cumulative Total Of Hours Worked From Previous Report.		158.5
Was Trenching/Scaffold/H (If Yes, attach statement or checklist sh	V Electrical/High Work Do owing inspection performed)	ne?		☐ Yes	⊠ No	Cumulative Total of Hours Worked From Start Of Construction.		176.5
Was Hazardous Material/V (If Yes, attach description of incident an	Vaste Released Into The I d proposed action)	Environment <sup>e</sup>	?	☐ Yes	⊠ No	Have Safety Require Met?	ements Been	⊠ Yes
List Safety Actions Taken This Date/Safety Inspections Conducted.  N/A								
Equipment/Material Received This Date to be Incorporated in Job.  1 – Site Truck – CH2M Hill								
1 – Site Van – J.J. S	Sosa							
Construction and P	lant Equipment on	Job Site, i	ncluding 1	Number c	of Hours	Used, This Dat	<u>e.</u>	
1 – Site Truck – Cl								
1 – POV – CH2M								
1 – Site Van – J.J. S	36 osa – 8 Hrs							

Work Force: Name, Location or Description	Employer	Number	<u>Trade</u>	<u>Hrs</u>
Terry McElveen	CH2MHill/CCI	1	SSup	1
Ryan Bitely	CH2M Hill	1	QAQC	9
Joshua Wallace	JJ Sosa	1	Sup	8

### Site 4

 Sampling – Ryan Bitely obtained air samples from SRS units, 1st of three consecutive days after lowering the screens.

### Sites 6, 16, and 38

 Mobilization – Terry McElveen (CH2M Hill) and Joshua Wallace (J.J. Sosa) mobilized to project today. Ryan took Josh to the excavation sites to show so that he can plan for contingencies. The excavation permits are finalized except for Utiliquest.

Terry McElveen	5/06/02
erry McElveen Contractors Superintendent	Date

	CONTRACTO	***************************************						
	l _	07/02						
Contract No.	CTO No.	Location		<del></del>	Project No		Report No.	uesday
N62467-98-D-09	95 011		AS Whitin	o Field		151168	1	09
	<u> </u>		·	15 1 1010				
	I2M HILL Constr	uctors, I	nc.		Superinten	ident: Terry	McElvee	n
AM Weather	PM Weather	•	Precipitation	1	Max Temp	,	Min Temp	
Partly Cloudy	Partly Cloud	l <b>y</b> !	0"		83°F	ļ	69°F	
					7	CCI Hours Worked	Today	20.5
	Was A Job Safety Meetin	ng Held This	Date?	☐ Yes	⊠ No	Subcontractor Hrs Worked Today		8
						Total Site Hours Worked Today		28.5
	Were There Any Lost Time Accidents This Date?			☐ Yes	⊠ No	Cumulative Total Of Hours Worked From Previous Report.		176.5
Was Trenching/Scaffold/HV Electrical/High Work Done? (If Yes, attach statement or checklist showing inspection performed)			☐ Yes	⊠ No	Cumulative Total of Hours Worked From Start Of Construction.		205	
Was Hazardous Material/M (If Yes, attach description of incident and	/aste Released Into The E proposed action)	Environment?	}	☐ Yes	⊠ No	Have Safety Requirements Been Met?		⊠ Yes
List Safety Actions Taken This Date/Safety Inspections Conducted.  N/A								
Equipment/Material I	Received This Date to	be Incorp	orated in Ic	ob.				
Chainsaw with ass								
Construction and Pl 1 – Site Truck – CF 1 – POV – CH2M I	H2M Hill	[ob Site, i	ncluding N	Number o	f Hours I	Used, This Date	<u>e.</u>	
1 - Site Van - II S								

Work Force: Name, Location or Description	Employer	Number	Trade	Hrs
Terry McElveen	CH2MHill/CCI	1	SSup	8.5
Ryan Bitely	CH2M Hill	1	QAQC	8
Beth	CH2M Hill	1		4
Joshua Wallace	JJ Sosa	1	Sup	8

### Site 4

• Sampling – Ryan and Beth obtained 2<sup>nd</sup> round of air samples from the wells, also took pressure/flow readings from SRS units as well as real time monitoring at the monitoring point wells.

# Sites 6, 16, and 38

• Mobilization – Toured the excavation sites again, discussed plans for work. Began working on obtaining the waste profiles for Waste Management landfill Springhill and lining out schedule for the excavations.

Te	rry	McElveen	5/07/02	
rry McElveen	Contra	ctors Superintendent	Date	

	CONTRACTO (Attach Ado		JCTION RE					5/08/02 Wednesday
Contract No.	CTO No.	Location			Project No	,	Report No	
N62467-98-D-099	95 011	N/	AS Whitin	g Field	•	151168	·	010
Contractor: CH	2M HILL Constr	uctors, I	nc.		Superinter	ndent: Terry	McElve	en
AM Weather	PM Weather		Precipitation		Max Temp		Min Temp	
Partly Cloudy	Partly Cloud	y	0"		87°F		71°F	
			•			CCI Hours Worked	Today	22
	Was A Job Safety Meeting Held This Date?			Yes	☐ No	Subcontractor Hrs Worked Today		33
		·				Total Site Hours Wo	rked Today	55
	Were There Any Lost Tir	ne Accidents	s This Date?	☐ Yes	⊠ No	Cumulative Total Of Worked From Previo		205
Was Trenching/Scaffold/HV Electrical/High Work Done? (If Yes, attach statement or checklist showing inspection performed)					⊠ No	Cumulative Total of Hours Worked From Start Of Construction.		d 260
Was Hazardous Material/Waste Released Into The Environment?  (If Yes, attach description of incident and proposed action)  Have Safety Required. Yes						Have Safety Require Met?	ements Been	⊠ Yes
List Safety Actions Taken T N/A	his Date/Safety Inspection	ons Conducte	<u>əd.</u>					
Equipment/Material I		be Incorp	orated in Jo	<u>b.</u>				
1 – Rubber Tire Ba								
1 – Dump Truck –	J.J. Sosa				A			
Construction and Pl	ant Equipment on	Job Site, i	including l	Number o	of Hours	Used, This Dat	<u>e.</u>	

- 1 Site Truck CH2M Hill 11 Hrs
- 1 POV CH2M Hill 11 Hrs
- 1 Site Van J.J. Sosa 11 Hrs
- 1 Rental Car J. J. Sosa 10 Hrs
- 1 Rubber Tire Backhoe J. J. Sosa 6 Hrs
- 1 Dump Truck J.J. Sosa 2 Hrs

Work Force: Name, Location or Description	<u>Employer</u>	Number	Trade	Hrs
Terry McElveen	CH2MHill/CCI	1	SSup	11
Ryan Bitely	CH2M Hill	1	QAQC	11
Joshua Wallace	JJ Sosa	1	Sup	11
Fred Portafe	JJ Sosa	1	Geo	11
John Staton	JJ Sosa	1	Oper	11

# Site 4

• Sampling – Ryan took the 3<sup>rd</sup> round of samples from the SRS units today.

### Sites 6, 16, and 38

- Mobilization JJ Sosa's crew arrived on site this morning, registered with pass/ID office. Heavy equipment arrived on site 1 backhoe and 1 dump truck.
- Excavation Began work at site 16, performed clearing of the area, cut down the pine tree and small shrubs in area. Began stockpiling clean soil from the on-site borrow pit at site 16 adjacent to excavation area.

Te	rry	McElveen	5/08/02
Terry McElveen	Contra	ctors Superintendent	Date



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

	T			T						
Date:		09/02		Report No:		460				
Project Name/Location:	NAS	0011								
Project No.	151168 Contract No: N62467-98-C-0095									
Task/Activity/Site:	Sites 4, 6, 16, & 38									
Site Superintendent:	Scott	Dunbai	ſ	Site Safety C	Officer:	Scott Du	ınbar			
AM Weather:	Warm, Hum	id, Clea	r, Calm	PM Weather:		Hot, Humid, C	Clear, Calm			
Min Temp (°F):		72	·	Max Temp (°	F):	85				
					on the second second second	Yes	No			
	Was A Job Safety N (If Yes, attach copy of the med			?						
	Were There Any Los (If Yes, attach copy of comple			Date?			×			
CCI Total W	orked Hours:		28		JA Jones Total Worked	Hours:	0			
Subcontractor(s)	Total Worked Hours:		29	Total	Worked Hours on Job Sit	te This Date:	57			
Cumulative Total of Work I	Hours From Previous I	Report:	9,856	Total	Work Hours From Start of	Construction:	9,913			
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist show	Electrical/High Work (	Oone?					⊠			
Was Hazardous Material/Wa (If Yes, attach description of incident and p		Environ	ment?				$\boxtimes$			
Have Safety Requirements E	Been Met?					×				
List Safety Violations, Correct	ctive Instructions Give	n, Correc	tive Actions T	aken and Result	ts of Safety Inspections Co	onducted:				
The daily tailgate safety	y meeting was con	ducted	with CCI a	nd JJS person	nel					
real factors and the second		190 - Suit Japan Hery Janus	er velocities of a charles of	nd Material Rec	The second secon	<b>(1)</b>				
	Equipment / Mate	rial	**************************************		Equipment No	Number/	/olume/Weight			
	JJS Barrow Pit S		<del></del>		N/A		5 yd <sup>3</sup>			
	••		onstruction :	and Plant Equip						
Plant/Equipm		Arrived	Departed	Safety Check		Number of Hours				
· · · · · · · · · · · · · · · · · · ·				Performed By	•	Idle	Repair			
Navy SR	8	In Or	eration		24					
Navy 500 gal. pl		<u>-</u>								
Navy SAR sy										
CCI Pick-up and		0700	1300	TM	6					
CCI Pick-up and		0930	1930	SD	10					
CH2M Hill I		0700	1700	RB	10					
JJS Van & To	<del>-</del>	0700	1930	JW	12					
JJS Rental C		0700	1200	FP	5					
JJS Chainsa	· · · · · · · · · · · · · · · · · · ·									
JJS Generat										
JJS Pressure W			,							
JJO T TESSUITE 11	usitei		1020	JS	12					
IIS Backho	ne l	0700	1 1930							
JJS Backho		0700	1930 1930							
JJS 5 yd³ Dump	Truck	0700	1930	JS	13	oject attributable to site, and	weather conditions, etc.)			
JJS 5 yd³ Dump Changed Conditions/Delays/	Truck	0700	1930	JS	13	oject attributable to site, and	weather conditions, etc.)			
JJS 5 yd³ Dump Changed Conditions/Delays/ None Noted Today	Truck	0700	1930	JS	13	oject attributable to site, and	weather conditions, etc.)			
JJS 5 yd³ Dump Changed Conditions/Delays/ None Noted Today Visitors to the Site:	Truck	0700	1930	JS	13	oject attributable to site, and	weather conditions, etc.)			
JJS 5 yd <sup>3</sup> Dump Changed Conditions/Delays/ None Noted Today	Truck	0700	1930	JS	13	oject attributable to site, and	weather conditions, etc.)			
JJS 5 yd³ Dump Changed Conditions/Delays/ None Noted Today Visitors to the Site:	Truck	0700	1930	JS	13	oject attributable to site, and	weather conditions, etc.)			



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/09/02		Report No:	460		
Project Name/Location	n:	NAS Whiting Field		CTO No	0011	0011	
Project No.		151168		Contract No:	N62467-98-C-009	5	
			CCI and CH2N	I Hill Man-hours			
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked	
Terry McElveen	CCI	18520	Super	Site Remediation	n Site 16	6	
Scott Dunbar	CCI	18507	Super	Site Remediation	n Site 16	10	
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	n Sites 4 & 16	10	
Beth Liu	CH2M Hill	31158	ENG	SRS O & M	Site 4	2	
					Total Man-hours Today	26	
					tal Man-hours This Year	667	
***	. Fall all at		Subcontract	or Man-hours	and the state of t		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked	
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remediation	n Site 16	12	
Fred Portofe	JJ Sosa	JJS-02	Ops Mng	r Site Remediation	n Site 16	5	
John Stanton	JJ Sosa	JJS-03	EO	Site Remediation	n Site 16	12	
					Total Man-hours Today	29	
				Tot	tal Man-hours This Year	263	

#### **Report Comments:**

- JJS started the day by transporting backfill soil from the on base barrow pit to Site 16, approximately 15 yd<sup>3</sup> was stockpiled at the site.
- It became apparent that JJS was having problems obtaining approval on the waste profile that they had submitted to Waste Management Springhill Landfill. Upon request CCI intervened and called Waste Management to elevate the hold, with in minutes Waste Management called JJS back with the approval.
- After Scott Dunbar had transitioned with Terry McElveen, Terry demobilized from the project.
- JJS began initial excavation at Site 16, stockpiling the excavated soil on with in the confines of the site. As expected
  the soil was laden with debris, of which it all appeared to be of the size that could be managed using their
  equipment.
- Due to extremely dry conditions, ambient dust was observed and JJS elected to upgrade to EPA Level C (i.e., Tyveck Coveralls and half-face respirator.
- JJS was advised that they were at risk for all additional soil excavated beyond the 2' bls +/- 4". It appeared as though their equipment operator was inexperienced.

#### Site 4

The weekly O&M was conducted at the site, air samples were collected (See the COC for details).

Scott Dunbar	5/09/2002
Site Superintendent's Signature	Date



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	05/10/02		Report No:		461		
Project Name/Location:	NAS Whiting	g Field	CTO No		0011		
Project No.	151168		Contract No:		N62467-98	-C-0095	
Task/Activity/Site:			Sites 4,	6, 16, & 38			
Site Superintendent:	Scott Dunbar	Scott Du	Scott Dunbar				
AM Weather:	Warm, Humid, Clea	Hot, Humid, C	Clear, Calm				
Min Temp (°F):	72	85					
			Manufacture Assistance		Yes	No	
JAX	Was A Job Safety Meeting H (If Yes, attach copy of the meeting minutes	leld This Date	?		×		
	Were There Any Lost Time A (If Yes, attach copy of completed OSHA re		⊠				
CCI Total W	orked Hours:	20		JA Jones Total Worked	Hours:	0	
Subcontractor(s) 1	Total Worked Hours:	22	Total	Worked Hours on Job Si	te This Date:	42	
Cumulative Total of Work I	lours From Previous Report:	9912	Total \	Work Hours From Start of	Construction:	9955	
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist showing	Electrical/High Work Done?			* + + + + + + + + + + + + + + + + + + +		⊠	
Was Hazardous Material/Wa (If Yes, attach description of incident and p	ste Released Into The Environ roposed action)	ment?				⊠	
Have Safety Requirements E	Been Met?				⊠		
List Safety Violations, Correct	ctive Instructions Given, Correct	tive Actions 1	Taken and Result	s of Safety Inspections C	onducted:		
	meeting was conducted		·····				
	Control of the Contro		nd Material Rece				
Section 1 Section 2	Equipment / Material	ALCOHOLD ST		Equipment No	Number/V	olume/Weight	
	Loader 2 ½ yd³			N/A	<del></del>	1ea	
	55 gallon drums					4ea	
Brinson Sand & Gravel	(BSG) Non-Haz Hauler	20 vd³ Dun	np Trailers			4ea	
	A PART AND THE PROPERTY OF THE PART AND THE		and Plant Equip	ment			
Plant/Equipme		Departed	Safety Check		Number of Hours		
		•	Performed By	Used	Idle	Repair	
Navy SRS	In Op	eration		24		· · · · · · · · · · · · · · · · · · ·	
Navy 500 gal. ple	oy tank						
Navy SAR sys							
CCI Pick-up and	Tools 0700	1600	SD	9			
CH2M Hill P	OV 0700	1830	RB	11			
JJS Van & To	ols 0700	1830	JW	12		<del></del>	
JJS Chainsa	w						
JJS Generate	or						
JJS Pressure Wa	asher						
JJS Backho		1830	JS	11			
JJS 5 yd³ Dump		1830	JS		13		
JJS Loader 2 1/2		1830	JS	7	10		
JJS 55-gal. Dru		1000		,	4		
BSG 20 yd <sup>3</sup> Dump	<del></del>			3	1		
	Conflicts Encountered: (List any co	nflicts with the delive	ery order (i.e., scope of w			reather conditions, etc.)	
None Noted Today							
Visitors to the Site:							
DJ. Mathews, NAS Whit	ing Field Environmental						
· · · · · · · · · · · · · · · · · · ·							

CONTRACTOR PRODUCTION REPORT REV 2 PREPARED: 06/12/02



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/10/02				461	
Project Name/Location:		NAS Whiting	g Field	CTO No 0011		1	
Project No.		151168		Contract No:		N62467-98-C-00	95
Employee	Employer	Employee No.	Title/Trade	de Work Performed		Work Location	Hours Worked
Scott Dunbar	CCI	18507	Super		Site Remediation	on Site 16	9
Ryan Bitely	CH2M Hill	32814	QAM		Site Remediation	on Site 16	11
Beth Liu	CH2M Hill	31158	ENG	SRS O & M		Site 4	0
				Total Man-hours Today			20
					To	otal Man-hours This Year	687
<u> </u>	- 200		Subcontrac	tor Man-ho	ours		
Employee	Employer	Employee No.	Title/Trad	le Work	Performed	Work Location	Hours Worked
Josh Wallace	JJ Sosa	JJS-01	PM/Su	р	Site Remediation	on Site 16	11
John Stanton	JJ Sosa	JJS-03	EO		Site Remediation	on Site 16	11
						Total Man-hours Today	22
					To	otal Man-hours This Year	285

#### **Report Comments:**

- JJS resumed excavation at Site 16, stockpiling the excavated soil on with in the confines of the site.
- JJS began loading Brinson Sand & Gravel trucks upon their arrival to the site, however, the rental loader hadn't arrived yet and excavation activities had to stop to load the trucks. Once the rental loader did arrive at the site excavation still was on hold as only one JJS personnel two people was qualified to operate heavy equipment.
- CCI having watched JJS's operations over the last day advised JJS verbally of their non-performance/non-conformance. It was clear that they were clearly under staffed with inexperienced personnel and that several discrepancies must be resolved for them to finish the project. The discrepancies included:
  - Spilling contaminants outside the exclusion zone, this would have to be cleaned up and would result in additional soil removed and time to remove it.
  - Destroying the excavation limit markers, this is their only control of the prescribed excavation limits.
  - <u>Lack of trained manpower to support the operation</u>, causing un-due delays and additional soil being removed beyond the scope of work.
  - Poor pre-mobilization preparation, resulting disorganized and slow operations.
- At JJS request, CCI re-established the excavation limit boundary markers scaling off work plan drawings.
- JJS convened a conference call between Fred Portofe & Richard Perry with JJS and Scott Dunbar. JJS expressed
  their concern with their poor performance and said that they would be making personnel changes to improve the
  situation.
- Amy Twitty and Mike Rossman were informed of the above information.
- JJS had 4 trucks at the site today to load with soil but due to their inability to load the trucks one left without a load. 3 trucks were loaded with approximately 45 tons of soil for disposal at WM Springhill Landfill.
- Early in the afternoon when JJS resumed excavation at Site 16 they ran the backhoe out of fuel and were unable to restart it. They called in a hertz mechanic to come and get the backhoe restarted for them.

Scott Dunbar	5/10/2002	
Site Superintendent's Signature		— Date
one Superintendent's Signature		



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	05	/11/02		Report No:	· · · · · · · · · · · · · · · · · · ·			462	
Project Name/Location:	NAS	Whiting	g Field	CTO N₀	CTO No				
Project No.	1	51168		Contract No:			N62467-98-	C-0095	
Task/Activity/Site:	Sites 4, 6, 16, & 38								
Site Superintendent:	Scot	t Dunbai		Site Safety C	Officer:	Scott Dunbar			
AM Weather:	Warm, Hur	nid, Clea	ır, Calm	PM Weather		Н	ot, Humid, C	lear, Calm	
Min Temp (°F):		75		Max Temp (	F):		89		
							Yes	No	
	Was A Job Safety (If Yes, attach copy of the r	Meeting H	leld This Date	?					
	Were There Any L (If Yes, attach copy of com			Date?				⊠	
CCI Total W	orked Hours:		6		JA Jones Total Work	ed Hou	rs:	0	
Subcontractor(s) T	otal Worked Hours:		12	Tota	l Worked Hours on Jol	b Site T	his Date:	18	
Cumulative Total of Work F	lours From Previous	Report:	9955	Total	Work Hours From Star	rt of Cor	nstruction:	9973	
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist showing		Done?							
Was Hazardous Material/Wa (If Yes, attach description of incident and p		he Environ	ment?					$\boxtimes$	
Have Safety Requirements E	Been Met?						×		
List Safety Violations, Correct	tive Instructions Giv	en, Correc	tive Actions T	aken and Resul	ts of Safety Inspection	s Condi	ucted:	•	
The daily tailgate safety	meeting was co	nducted	with CCI a	nd JIS person	nel				
			ing the control of th	nd Material Rec	eived	10. 🐙	de 1: 5 5		
	Equipment / Ma		•		Equipment No	A C 17 A S S S S S S S S S S S S S S S S S S		olume/Weight	
Brinson Sand & Grave	<del></del>		18 vd <sup>3</sup> Dum	n Trailers	_4-r-r				
						1		zea l	
					oment 50	<b>e</b> bioch		2ea	
		C	onstruction	and Plant Equip		\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	13 A A D		
Plant/Equipme						\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -			
Plant/Equipme	ent	C Arrived	onstruction of Departed	and Plant Equip	Used	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipme Navy SRS	ent G	C Arrived	onstruction	and Plant Equip		\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipmo Navy SRS Navy 500 gal. plo	ent G oy tank	C Arrived	onstruction of Departed	and Plant Equip	Used	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipmo Navy SRS Navy 500 gal. pl Navy SAR sys	ent  S  oy tank stem	Arrived In Op	Departed peration	Safety Check Performed By	Used 24	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipmon Navy SRS Navy 500 gal. pl Navy SAR sys CCI Pick-up and	ent  S  oy tank stem d Tools	C Arrived	onstruction of Departed	safety Check Performed By	Used 24 6	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipme Navy SRS Navy 500 gal. pl Navy SAR sys CCI Pick-up and CH2M Hill P	ent  S oy tank stem d Tools	Arrived In Op  0600	Departed Departed Departed Departed Departed	Safety Check Performed By SD RB	Used 24 6 0	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipme Navy SRS Navy 500 gal. pl Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To	ent  S oy tank stem d Tools POV pols	Arrived In Op	Departed peration	safety Check Performed By	Used 24 6	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipme Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To	ent  S oy tank stem d Tools OV pols	Arrived In Op  0600	Departed Departed Departed Departed Departed	Safety Check Performed By SD RB	Used 24 6 0	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipme Navy SRS Navy 500 gal. pl Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa	ent  Sooy tank stem d Tools POV pols	Arrived In Op  0600	Departed Departed Departed Departed Departed	Safety Check Performed By SD RB	Used 24 6 0	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W	ent  S oy tank stem d Tools OOV ools ow or fasher	In Op 0600	Departed Departed Departed Departed Departed Departed Departed Departed Departed	Safety Check Performed By SD RB JW	Used 24 6 0 12	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho	ent  Sooy tank stem d Tools POV pols w oor asher	Arrived In Op  0600	Departed Departed Departed Departed Departed	Safety Check Performed By SD RB	Used 24 6 0	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR system CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump	ent  Soy tank stem d Tools OV ools w or fasher fee Truck	Arrived In Op 0600 0600	Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed	SID RB JW	Used 24  6 0 12	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours		
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump	ent  S oy tank stem d Tools OV ools or fasher se Truck 6 yd3	In Op 0600	Departed Departed Departed Departed Departed Departed Departed Departed Departed	Safety Check Performed By SD RB JW	Used 24 6 0 12	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours Idle		
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump JJS Loader 2 ½ JJS 55-gal. Dr	ent  Sooy tank stem d Tools OV ools w or fasher  Truck 6 yd3 ums	Arrived In Op 0600 0600	Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed Departed	SID RB JW	Used 24  6 0 12  6	\$25 - 75 - 75 - 75 - 75 - 75 - 75 - 75 -	ber of Hours Idle		
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR system CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump JJS Loader 2 ½ JJS 55-gal. Dr BSG 18 yd³ Dump	ent  Soy tank stem d Tools OV ools w or fasher  Truck 2 yd3 ums O Trailers	Arrived In Op 0600 0600 0600	Departed Dep	SD RB JW	Used 24  6 0 12  6 1	Num	ber of Hours Idle  4 1	Repair	
Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump JJS Loader 2 ½ JJS 55-gal. Dr BSG 18 yd³ Dump Changed Conditions/Delays/	ent  Soy tank stem d Tools OV ools w or fasher  Truck 2 yd3 ums O Trailers	Arrived In Op 0600 0600 0600	Departed Dep	SD RB JW	Used 24  6 0 12  6 1	Num	ber of Hours Idle  4 1	Repair	
Plant/Equipment Navy SRS Navy 500 gal. ple Navy SAR system CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump JJS Loader 2 ½ JJS 55-gal. Dr BSG 18 yd³ Dump	ent  Soy tank stem d Tools OV ools w or fasher  Truck 2 yd3 ums O Trailers	Arrived In Op 0600 0600 0600	Departed Dep	SD RB JW	Used 24  6 0 12  6 1	Num	ber of Hours Idle  4 1	Repair	
Navy SRS Navy 500 gal. ple Navy SAR sys CCI Pick-up and CH2M Hill P JJS Van & To JJS Chainsa JJS Generat JJS Pressure W JJS Backho JJS 5 yd³ Dump JJS Loader 2 ½ JJS 55-gal. Dr BSG 18 yd³ Dump Changed Conditions/Delays/ None Noted Today	ent  Soy tank stem d Tools OV ools w or fasher  Truck 2 yd3 ums O Trailers	Arrived In Op 0600 0600 0600	Departed Dep	SD RB JW	Used 24  6 0 12  6 1	Num	ber of Hours Idle  4 1	Repair	



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/11/02		Report No:	462		
Project Name/Location	n:	NAS Whiting Field		CTO No	0011		
Project No.		1		Contract No:	N62467-98-C-009		
And the state of t		41月月	CCI and CH2N	A Hill Man-hours			
Employee	Employer	Employee No.	Title/Trade Work Performed		Work Location	Hours Worked	
Scott Dunbar	CCI	18507	Super	Site Remediation	Site 16	6	
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	Site 16	0	
Beth Liu	CH2M Hill	31158	ENG	SRS O & M	Site 4	0	
				Total Man-hours Today			
					Man-hours This Year	693	
		5.基 扩展型	Subcontract	or Man-hours	LA MONEY		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked	
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remediation	Site 16	6	
John Stanton	JJ Sosa	JJS-03	EO	Site Remediation	Site 16	6	
				T	otal Man-hours Today	12	
					Man-hours This Year	297	

#### **Report Comments:**

- JJS resumed excavation at Site 16, stockpiling the excavated soil on with in the confines of the site.
- JJS began loading Brinson Sand & Gravel trucks upon their arrival to the site, however, site excavation was on hold as only one JJS personnel two people was qualified to operate heavy equipment.
- JJS had 2 trucks at the site today to load with soil but due to their inability to load the trucks one left without a load. The loaded truck departed site with approximately 18 tons of soil, for disposal at WM Springhill Landfill.
- JJS decontaminated their equipment in preparation for moving over to Site 38, first thing Monday morning.

Scott Dunbar	5/11/2002
Site Superintendent's Signature	Date



# CONTRACTOR PRODUCTION REPORT (ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/12/02		Report No:		463	
Project Name/Location:		NAS Whiting	Field	CTO No		0011	
Project No.		151168		Contract No:		N62467-98-0	C-0095
Task/Activity/Site:							
Site Superintendent:							
AM Weather:		PM Weather:					
Min Temp (ºF):							
	460		Yes	No			
		Safety Meeting He opy of the meeting minutes)	old This Date	?			×
		e Any Lost Time Ac opy of completed OSHA repo		Date?			×
CCI Tota	Worked Hours	:		J	A Jones Total Worked H	ours:	0
Subcontractor(s	) Total Worked	Hours:		Total W	orked Hours on Job Site	This Date:	
Cumulative Total of Wor	k Hours From F	revious Report:	9973	Total Wo	ork Hours From Start of (	Construction:	9973
Was Trenching/Scaffold/H (If Yes, attach statement or checklist st	V Electrical/Hig nowing inspection perfo	th Work Done?					$\boxtimes$
Was Hazardous Material/ (If Yes, attach description of incident at		Into The Environn	nent?				☒
Have Safety Requirements Been Met? (If No, explain in the next box))						×	
List Safety Violations, Cor	rective Instructi	ons Given, Correcti	ive Actions T	aken and Results	of Safety Inspections Co	nducted:	
No Site Activity Toda	y						
		数分理 推		d Majorial Receiv			
M-100-100-100-100-100-100-100-100-100-10	Equipme	nt / Material			Equipment No	Number/Vo	lume/Weight
<b>V</b> (V)			il tritatore	ind <b>Alan Egulpa</b> i	om e		
Plant/Equip	ment	Arrived	Departed	Safety Check	N	umber of Hours	
				Performed By	Used	ldle	Repair
Navy S		In Ope	ration		24		
Navy 500 gal.							
Navy SAR				<u> </u>			
Changed Conditions/Delay None Noted Today	/S/COMMICTS ENC	OUTILETED: (List any con	Micts with the deliv	ery order (i.e., scope of work	and/or drawings], delays to the proj	ect attributable to site, and we	eather conditions, etc.)
				····			
Visitors to the Site:							
Visitors to the Site:  None Noted Today							
Visitors to the Site:  None Noted Today	Employer	Employee No.	State of the state	Work Peri		Work Locati	
Visitors to the Site: None Noted Today	Employer	Employee			formed	Work Locat	Worked
Visitors to the Site: None Noted Today	Employer	Employee No.	Title/Trade	Work Peri	formed Tota Total M		Worked day 0
Visitors to the Site: None Noted Today  Employee		Employee No.	Title/Trade	Work Peri	formed Tota Total M	l Man-hours To	Worked day 0
Visitors to the Site: None Noted Today	Employer Employer	Employee No.	Title/Trade	Work Peri	formed Tota Total M	l Man-hours To	Worked day 0 Year 693
Visitors to the Site:  None Noted Today  Employee		Employee No.	Title/Trade	Work Peri	Tota Total M i formed Total	l Man-hours To an-hours This \ Work Locati	Worked day 0 (ear 693 ion Hours Worked day 0
Visitors to the Site: None Noted Today  Employee		Employee No.	Title/Trade	Work Peri	Tota Total M i formed Total	l Man-hours To an-hours This \ Work Locati	Worked day 0 (ear 693 ion Hours Worked day 0

No Site Activity Today.

Scott Dunbar	5/12/2002
Site Superintendent's Signature	Date



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

						T			
Date:		13/02		Report No:	<del></del>		464		
Project Name/Location:	NAS Whiting Field			CTO No			0011		
Project No.	15	1168	~	Contract No:	· · · · · · · · · · · · · · · · · · ·		N62467-98-	-C-0095	
Task/Activity/Site:				Sites 4,	6, 16, & 38	T			
Site Superintendent:	Scott	Site Safety O	fficer:	Scott Dunbar					
AM Weather:	Warm, Humi	id, Clea	ır, Calm	PM Weather:		Н	lot, Humid, C	lear, Calm	
Min Temp (°F):	75 Max Temp (°F):						89		
	$\frac{1}{ \mathcal{X} } \frac{ \mathcal{X} }{ \mathcal{X} } = \frac{1}{ \mathcal{X} } \frac{ \mathcal{X} }{ \mathcal{X} }$		i cu			4	Yes	No	
	Was A Job Safety M (if Yes, attach copy of the med			?			×		
	Were There Any Los (If Yes, attach copy of complete	st Time A led OSHA rej	port)	Date?					
	orked Hours:		21		JA Jones Total Wo		···-	0	
	otal Worked Hours:		24		Worked Hours on .		<del></del>	45	
Cumulative Total of Work H			9973	Total V	Nork Hours From S	tart of Co	nstruction:	10018	
Was Trenching/Scaffold/HV E	ng inspection performed)								
Was Hazardous Material/Was (If Yes, attach description of incident and pro-	oposed action)	Environ	ment?					☒	
Have Safety Requirements Boundary (If No. explain in the next box))	een Met?						⊠		
List Safety Violations, Correct	tive Instructions Giver	n, Correc	tive Actions T	aken and Result	s of Safety Inspection	ons Cond	ucted:		
The daily tailgate safety			with CCI a	nd JJS personi					
				of the same of the same		医小刀 兽		The second of the second secon	
	生物 化红油		equipment an	nd Material Rece	iveo		784		
	Equipment / Mate	Action of the same	equipment ar	id Malerial Rece	Equipment N	lo		olume/Weight	
Brinson Sand & Gravel	Equipment / Mate (BSG) Non-Haz I	rial Hauler			E. C. 4 322	lo	Number/V		
Brinson Sand & Gravel	Equipment / Mate	rial Hauler	18 yd³ Dun		Equipment N	T. T. S. S. J. J. S. S. J. J. J. J. S. S. S. S. S. S. S. S. S. S. S. S. S.	Number/V	olume/Weight	
Brinson Sand & Gravel	Equipment / Mate (BSG) Non-Haz I	rial Hauler	18 yd³ Dun	np Trailers and Plant Equip Safety Check	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel	Equipment / Mate (BSG) Non-Haz I	rial Hauler C	18 yd³ Dun onstruction	np Trailers and Plant Equip	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel	Equipment / Mate (BSG) Non-Haz I	rial Hauler C Arrived	18 yd³ Dun onstruction	np Trailers and Plant Equip Safety Check	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel Plant/Equipme	Equipment / Mate (BSG) Non-Haz I	rial Hauler C Arrived	18 yd³ Dum onstruction i Departed	np Trailers and Plant Equip Safety Check	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel Plant/Equipme Navy SRS	Equipment / Mate (BSG) Non-Haz I	rial Hauler C Arrived	18 yd³ Dum onstruction i Departed	np Trailers and Plant Equip Safety Check	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plc	Equipment / Mate (BSG) Non-Haz I ent /	rial Hauler C Arrived	18 yd³ Dum onstruction i Departed	np Trailers and Plant Equip Safety Check	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo	Equipment / Mate (BSG) Non-Haz I ent  y tank etem Tools	rial Hauler C Arrived In Op	18 yd³ Dum onstruction a Departed peration	np Trailers and Plant Equip Safety Check Performed By	Equipment N		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and	Equipment / Mate (BSG) Non-Haz I ent  oy tank etem I Tools OV	rial Hauler C Arrived In Op	18 yd³ Dum onstruction Departed peration 1900	np Trailers and Plant Equip Safety Check Performed By  SD RB	Equipment N ment Used 24		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po	Equipment / Mate (BSG) Non-Haz I  ent  by tank stem I Tools OV ols	rial Hauler C Arrived In Op 0700 0700	18 yd³ Dum onstruction and Departed Departed Departed Trailers and Plant Equip Safety Check Performed By	Equipment N  ment  Used  24  12  9		Number/V	olume/Weight 1ea		
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsav	Equipment / Mate (BSG) Non-Haz I  ont  y  tank  oy tank  stem  l Tools  OV  ols  w	rial Hauler C Arrived In Op 0700 0700	18 yd³ Dum onstruction and Departed Departed Departed Trailers and Plant Equip Safety Check Performed By  SD RB	Equipment N  ment  Used  24  12  9		Number/V	olume/Weight 1ea		
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsay  JJS Generato	Equipment / Mate (BSG) Non-Haz I  over tank  etem I Tools OV ols  w	rial Hauler C Arrived In Op 0700 0700	18 yd³ Dum onstruction and Departed Departed Departed Trailers and Plant Equip Safety Check Performed By  SD RB	Equipment N  ment  Used  24  12  9		Number/V	olume/Weight 1ea		
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsav  JJS Generato  JJS Pressure Wa	Equipment / Mate (BSG) Non-Haz I  over the state of the s	rial Hauler C Arrived In Op 0700 0700 0700	18 yd³ Dum onstruction a Departed peration 1900 1600 1900	and Plant Equip Safety Check Performed By  SD RB JW	Equipment N  ment  Used 24  12 9 12		Number/V	olume/Weight 1ea	
Brinson Sand & Gravel  Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsav  JJS Generato  JJS Pressure Wa  JJS Backhoo	Equipment / Mate (BSG) Non-Haz I  ont  y  ont  Tools  OV  ols  w  or  asher  e	rial Hauler C C Arrived In Op 0700 0700 0700 0700 0700 0700 0700 0	18 yd³ Dum onstruction and Departed peration 1900 1600 1900	sp Trailers  and Plant Equip  Safety Check Performed By  SD  RB  JW  RS	Equipment N  ment  Used 24  12 9 12		Number/V	olume/Weight 1ea	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & To  JJS Chainsav  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump	Equipment / Mate  (BSG) Non-Haz I  (BSG)	rial Hauler C Arrived In Op 0700 0700 0700 0700 1200	18 yd³ Dum onstruction a Departed peration 1900 1600 1900	sp Trailers and Plant Equip Safety Check Performed By  SD RB JW  RS ,RS	Equipment N  ment  Used 24  12 9 12 7		Number/V	olume/Weight 1ea	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & To  JJS Chainsay  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump	Equipment / Mate (BSG) Non-Haz I  over the state of the s	rial Hauler C C Arrived In Op 0700 0700 0700 0700 0700 0700 0700 0	18 yd³ Dum onstruction and Departed peration 1900 1600 1900	sp Trailers  and Plant Equip  Safety Check Performed By  SD  RB  JW  RS	Equipment N  ment  Used 24  12 9 12		Number/V	olume/Weight 1ea	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsan  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump  JJS Loader 2 ½  JJS 55-gal. Dru	Equipment / Mate (BSG) Non-Haz I  over tank  etem I Tools OV ols w or asher e Truck eyd³ ums	rial Hauler C Arrived In Op 0700 0700 0700 0700 1200	18 yd³ Dum onstruction a Departed peration 1900 1600 1900	sp Trailers and Plant Equip Safety Check Performed By  SD RB JW  RS ,RS	Equipment N  ment  Used 24  12 9 12 7 12		Number/V	olume/Weight 1ea	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsay  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump  JJS Loader 2 ½  JJS 55-gal. Dru  BSG 18 yd³ Dump	Equipment / Mate  (BSG) Non-Haz I  (BSG)	rial Hauler C C Arrived In Op 0700 0700 0700 0700 0700 0700 0700 0	18 yd³ Dum onstruction a Departed peration 1900 1600 1900 1900 1900	sp Trailers and Plant Equip Safety Check Performed By  SD RB JW  RS RS RS	Equipment N  ment  Used 24  12 9 12 7 12 1	Num	Number/V  aber of Hours Idle	olume/Weight  1ea  Repair	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & To  JJS Chainsav  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump  JJS Loader 2 ½  JJS 55-gal. Dru  BSG 18 yd³ Dump  Changed Conditions/Delays/O	Equipment / Mate  (BSG) Non-Haz I  (BSG)	rial Hauler C C Arrived In Op 0700 0700 0700 0700 0700 0700 0700 0	18 yd³ Dum onstruction a Departed peration 1900 1600 1900 1900 1900	sp Trailers and Plant Equip Safety Check Performed By  SD RB JW  RS RS RS	Equipment N  ment  Used 24  12 9 12 7 12 1	Num	Number/V  aber of Hours Idle	olume/Weight  1ea  Repair	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & Too  JJS Chainsay  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump  JJS Loader 2 ½  JJS 55-gal. Dru  BSG 18 yd³ Dump  Changed Conditions/Delays/O  None Noted Today	Equipment / Mate  (BSG) Non-Haz I  (BSG)	rial Hauler C C Arrived In Op 0700 0700 0700 0700 0700 0700 0700 0	18 yd³ Dum onstruction a Departed peration 1900 1600 1900 1900 1900	sp Trailers and Plant Equip Safety Check Performed By  SD RB JW  RS RS RS	Equipment N  ment  Used 24  12 9 12 7 12 1	Num	Number/V  aber of Hours Idle	olume/Weight 1ea Repair	
Plant/Equipme  Navy SRS  Navy 500 gal. plo  Navy SAR sys  CCI Pick-up and  CH2M Hill Po  JJS Van & To  JJS Chainsav  JJS Generato  JJS Pressure Wa  JJS Backhoe  JJS 5 yd³ Dump  JJS Loader 2 ½  JJS 55-gal. Dru  BSG 18 yd³ Dump  Changed Conditions/Delays/O	Equipment / Mate  (BSG) Non-Haz I  (BSG)	rial Hauler C C Arrived In Op 0700 0700 0700 0700 0700 0700 0700 0	18 yd³ Dum onstruction a Departed peration 1900 1600 1900 1900 1900	sp Trailers and Plant Equip Safety Check Performed By  SD RB JW  RS RS RS	Equipment N  ment  Used 24  12 9 12 7 12 1	Num	Number/V  aber of Hours Idle	olume/Weight 1ea Repair	



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/13/02		Report No:	464	· · · · · · · · · · · · · · · · · · ·
Project Name/Location	:	NAS Whiting Field		CTO No	0011	
Project No.	151168		Contract No:	N62467-98-C-009	5	
			CCI and CH2	d CH2M Hill Man-hours		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Super	Site Remediatio	n Site 38	12
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediatio	n Site 38	9
Beth Liu	CH2M Hill	31158	ENG	SRS O & M	Site 4	0
			Total Man-hours Today			21
				To	tal Man-hours This Year	714
			Subcontract	or Man-hours		
Employee	Employer	Employee No.	Title/Trad		Work Location	Hours Worked
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remediation	n Site 16	12
Rockie Stoeffler	JJ Sosa	JJS-04	EO	Site Remediation	n Site 16	12
					Total Man-hours Today	24
				То	tal Man-hours This Year	321

#### **Report Comments:**

- As promised JJS replaced their equipment operator over the weekend. The new operator Rockie Stoeffler was
  provided a safety plan orientation and AHA review before starting work.
- JJS dug out the 2 small pits at Site 38, these pits were roughly 10' x 10' x 2' on the side of a slope. Both pits were completely excavated, backfilled, and covered with sod today.
- JJS loaded one Brinson Sand & Gravel trucks with soil from Site 38. The truck departed site with approximately 18 tons of soil, for disposal at WM Springhill Landfill.
- JJS decontaminated their equipment in preparation for moving back over to Site 16, first thing tomorrow morning.

Scott Dunbar	5/13/2002
Site Superintendent's Signature	Date



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	05/14/		Report No:			465			
Project Name/Location:	NAS Wh	iting	Field	CTO No			0011		
Project No.	15116	8		Contract No	:		N62467-98	S-C-0095	
Task/Activity/Site:				Sites 4	, 6,	16, & 38			
Site Superintendent:	Scott Dunbar Site Safety Officer:					Scott Du	Scott Dunbar		
AM Weather:	Warm, Humid, Clear, Calm PM Weather.						Hot, Humid, Clear, Calm		
Min Temp (°F):	73 Max Temp (°F):						93		
				s I			Yes	No	
	Was A Job Safety Meeting of the meeting of	ing He					×		
	Were There Any Lost Ti (If Yes, attach copy of completed Of			s Date?					
CCI Total W	orked Hours:		22		JΑ	Jones Total Worked	Hours:	0	
Subcontractor(s) 1	Total Worked Hours:		24	Tota	ıl Wo	orked Hours on Job Sit	e This Date:	46	
Cumulative Total of Work I	Hours From Previous Repo	ort:	10018	Total	Wor	k Hours From Start of	Construction:	10064	
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist show		?			,	,		×	
Was Hazardous Material/Wa (If Yes, attach description of incident and p		vironn	nent?						
Have Safety Requirements E	Been Met?		٠				⊠		
List Safety Violations, Correct	ctive Instructions Given, Co	orrecti	ve Actions 1	Taken and Resu	ts of	Safety Inspections Co	onducted:	<u> </u>	
The daily tailgate safety									
		1. 1 47 year Notice of		nd Material Rec	reference to the	- 7:5:17:- 1-7-min	· B FF FF FF		
	Equipment / Material		Page 1981			Equipment No	Number/	Volume/Weight	
Backfi	ill soil from on base b	arrov	v nit		•	Equipment 110		30 yd <sup>3</sup>	
Brinson Sand & Grave			<u> </u>	nn Trailers				1ea	
		CY AUGUSTON		and Plant Equi	ome	m - 172			
Plant/Equipme			Departed	Safety Check	Contract description		lumber of Hours		
1.1		-		Performed By		Used	Idle	Repair	
Navy SRS	S In	ı Ope	ration		Ť	24		· · · · · · · ·	
Navy 500 gal. pl					+				
Navy SAR sys		-+			+				
CCI Pick-up and		n	1700	SD	+	10	V 118 16 as (**		
CH2M Hill P			1900	RB	+	12			
JJS Van & To			1900	JW	+	12			
JJS Chainsa		<del>~</del> +	1700	) * *	+	12			
JJS Generat					+				
JJS Pressure W		-			+				
JJS Tiessure w			1000	DC.	+	10			
		-	1900	RS	+	12			
JJS 5 yd³ Dump			1900	RS	+	7			
JJS Loader 2 1/2		<del>10</del>	1900	RS	_	12			
JJS 55-gal. Dri			:		+		4		
Backfill So					+	30 yd <sup>3</sup>			
BSG 18 yd <sup>3</sup> Dump						1			
Changed Conditions/Delays/	Commets Encountered: (List	any conf	ncts with the deliv	rery order [i.e., scope of	work a	nd/or drawings], delays to the pro	ject attributable to site, and	weather conditions, etc.)	
None Noted Today Visitors to the Site:				v					
Mr. Jim Holland, NAS V	Vhiting Field Environ	nmeni	tal						



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/14/02		Report No:	465	
Project Name/Location	ame/Location: NAS Whiting		g Field	CTO No	0011	
Project No.	151168			Contract No:	N62467-98-C-0095	
			CCI and CH2	M Hill Man-hours		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Super	Site Remediation	on Site 38	10
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	on Site 38	12
Beth Liu	CH2M Hill	31158	ENG SRS O & M		Site 4	0
					Total Man-hours Today	22
				T	otal Man-hours This Year	736
			Subcontract	or Man-hours		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remediation	on Site 16	12
Rockie Stoeffler	JJ Sosa	JJS-04	EO	Site Remediation		12
					Total Man-hours Today	24
Total Man-hours This Year						345

#### **Report Comments:**

- Due to extensive water accumulation at Site 6, JJS elected to switch operation back to Site 16.
- JJS finished the excavation at Site 16 today, however it is difficult to say how grossly they over excavated they area.
- JJS loaded one Brinson Sand & Gravel trucks with soil from Site 16. The truck departed site with approximately 18 tons of soil, for disposal at WM Springhill Landfill.
- JJS decontaminated their equipment and began backfilling Site 16.

Scott Dunbar	5/14/2002		
Site Superintendent's Signature	Date		



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:	05/15/02		Report No:			466		
Project Name/Location:	NAS Whiting Field		g Field	CTO No			0011	
Project No.	151168			Contract No:		ı	N62467-98-C-0095	
Task/Activity/Site:				Sites 4,	6, 16, & 38			
Site Superintendent:	Scott I	Dunba	r	Site Safety C	Officer:		Scott Du	ınbar
AM Weather:	Warm, Humio	d, Clea	ar, Calm	PM Weather:		Hot,	, Humid, C	Clear, Calm
Min Temp (°F):				Max Temp (°	F):	88		
					Yes	No		
	Was A Job Safety Me (If Yes, attach copy of the meet	eeting F	leld This Date	?				
	Were There Any Los (If Yes, attach copy of complete			Date?				
CCI Total W	orked Hours:		27		JA Jones Total Worker	d Hours:		0
Subcontractor(s) T	otal Worked Hours:		29	Tota	Worked Hours on Job	Site This	Date:	56
Cumulative Total of Work H	lours From Previous R	eport:	10064	Total '	Work Hours From Start	of Const	ruction:	10120
Was Trenching/Scaffold/HV E	Electrical/High Work Dong inspection performed)	one?						
Was Hazardous Material/Was (If Yes, attach description of incident and pro		Enviror	nment?					$\boxtimes$
Have Safety Requirements B (If No, explain in the next box))	Been Met?						×	
List Safety Violations, Correc	tive Instructions Given	, Corre	ctive Actions T	aken and Result	ts of Safety Inspections	Conduct	ed:	
The daily tailgate safety	meeting was cond	ducted	with CCI a	nd JJS person	nel			
	To the							7. 7. 6
and a substantial Asia population qualifications between the second particular and the second pa	Equipment / Mater		0.*Nasv.* (\$.* tayansa yan±±±××√×	"was, other the Palent for ", 245 to Justice 9	Equipment No		Number/	Volume/Weight
Backfi	ll soil from on base		w pit				2	26 yd³
Brinson Sand & Gravel	<del></del>			np Trailers				2ea
	ALL PAR		SERVICE TO A SERVI	and Plant Equip	oment :	Pr 11	2.85 ye	1.1
Plant/Equipme							lumber of Hours	
			'	Performed By			ldle	Repair
Navy SRS	3	In O	peration		24			
Navy 500 gal. plo								-,
Navy SAR sys	stem	•					***************************************	
CCI Pick-up and		0630	2100	SD	14 1/2			
CH2M Hill P	OV (	0630	1900	RB	10 ½			
JJS Van & To	ools (	0630	2100	JW	14 1/2			
JJS Chainsa	w							
JJS Generate	or							
JJS Pressure Wa	asher							
JJS Backho	e (	0630	2100	RS	14 ½			
JJS 5 yd³ Dump	Truck (	0630	2000	RS	8			
JJS Loader 2 1/2	$v  ext{yd}^3$	0630	2100	RS	14 1/2		-	
JJS 55-gal. Dru	ums						4	
Backfill Soi					26 yd³			
	;		<del> </del>	†	<u> </u>			
BSG 18 yd <sup>3</sup> Dump					2			
BSG 18 yd³ Dump Changed Conditions/Delays/0	Trailers	(List any o	conflicts with the deliv	rery order (i.e., scope of t		project attrit	outable to site, and	weather conditions, etc.)
BSG 18 yd³ Dump Changed Conditions/Delays/O None Noted Today	Trailers	(List any o	conflicts with the deliv	ery order (i.e., scope of v		project attrit	outable to site, and	weather conditions, etc.)
Changed Conditions/Delays/0	Trailers	(List any o	conflicts with the deliv	rery order (i.e., scope of t		project attrit	outable to site, and	weather conditions, etc.)



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/15/02		Report No:	466	
Project Name/Location:	tion: NAS Whiting		Field CTO No		0011	
Project No.		151168		Contract No:	N62467-98-C-009	5
Market Commence of the Commenc		2 47 2007	CCI and CH2	V Hill Man-hours		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Super	Site Remediation	on Site 38	14 1/2
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation	on Sites 4 & 38	10 1/2
Beth Liu	CH2M Hill	31158	ENG	SRS O & M	Site 4	2
					Total Man-hours Today	27
				To	otal Man-hours This Year	738
		医心胚 抑	Subcontrac	or Man-hours		
Employee	Employer	Employee No.	Title/Trad	e Work Performed	Work Location	Hours Worked
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remediatio	n Site 16	14 1/2
Rockie Stoeffler	JJ Sosa	JJS-04	EO	Site Remediatio	n Site 16	14 1/2
					Total Man-hours Today	29
Total Man-hours This Year						374

#### **Report Comments:**

- JJS excavated Site 6 to the prescribed limits, upon completion of the excavation, the area was backfilled and compacted, finish graded and centipede sod was installed to cover the disturbed areas.
- JJS loaded two Brinson Sand & Gravel trucks with soil from Site 6. The truck departed site with approximately 40 tons of soil, for disposal at WM Springhill Landfill.
- JJS decontaminated their equipment prior to backfilling the excavation at Site 6.

#### Site 4

• The weekly O & M was conducted on the SRS units. Monitoring was conducted at the micro monitoring points, as well as, the pressures and flow rates of the treatment units recorded.

Scott Dunbar	5/15/2002			
Site Superintendent's Signature	Date			



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

	1					4.5		
Date:	05/16/02 Report No:				467 0011			
Project Name/Location:	NAS Whi		CTO No		N62467-98-C-0095			
Project No.	151168	3	Contract No			N62467-98-0	0095	
Task/Activity/Site:		Sites 4, 6, 16, & 38						
Site Superintendent:	Scott Dur		Site Safety (	<del></del>		Scott Dur		
AM Weather:	Warm, Humid, C	loudy, Caln			Ho	ot, Humid, Clo	udy, Calm	
Min Temp (°F):	68		Max Temp (		SET. 1	78		
						Yes	No	
and the state of t	Was A Job Safety Meetil (If Yes, attach copy of the meeting m	ng Held This [ inutes)	Date?			⊠		
	Were There Any Lost Tir (If Yes, attach copy of completed OS		This Date?					
CCI Total W	Vorked Hours:	2	2	JA Jones Total Wor	ked Hou	irs:	0	
Subcontractor(s) 7	Total Worked Hours:	2:	2 Tota	al Worked Hours on Jo	b Site T	his Date:	44	
Cumulative Total of Work I	Hours From Previous Repo	ort: 101	20 Total	Work Hours From Sta	art of Co	nstruction:	10164	
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist show	Electrical/High Work Done ing inspection performed)	?	•				⊠	
Was Hazardous Material/Wa (If Yes, attach description of incident and p		vironment?					×	
Have Safety Requirements E	Been Met?					×		
List Safety Violations, Correct	ctive Instructions Given, Co	rrective Actio	ns Taken and Resu	ilts of Safety Inspection	ns Cond	ucted:		
The daily tailgate safety								
				eived ·				
	Equipment / Material	<b>*</b> • • • • • • • • • • • • • • • • • • •		Equipment No		Number/Vo	olume/Weight	
Backf	ill soil from on base ba	arrow pit				45	i yd³	
Brinson Sand & Grave			Dump Trailers			1	lea	
			ion and Plant Equi	pment	<b>1</b>			
Plant/Equipm						Number of Hours		
			Performed By			ldle	Repair	
Navy SR	S In	Operation		24	_			
Navy 500 gal. pl							· · · · · · · · · · · · · · · · · · ·	
Navy SAR sy					_			
CCI Pick-up and	******	0 1700	SD	11				
CH2M Hill F				11				
JJS Van & To				11				
JJS Chainsa		0 1700			-			
JJS General					+			
JJS Pressure W		0 1700	JW	3				
JJS Hessule W				11	+		***	
JJS 5 yd³ Dump				11				
JJS Loader 2 3	· · · · · · · · · · · · · · · · · · ·	0 1700	RS	11				
JJS 55-gal. Dr				2		2		
Backfill So				45 yd <sup>3</sup>				
BSG 18 yd <sup>3</sup> Dump				1			anth an anadision 4- N	
Changed Conditions/Delays/	CONNICIS ENCOUNTERED: (List	any conflicts with the	e delivery order [i.e., scope o	or work and/or drawings], delays k	o the project	attributable to site, and w	reamer conditions, etc.)	
None Noted Today								
Visitors to the Site:  None Noted Today								



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/16/02		Report No:	467	
Project Name/Location	1:	NAS Whiting Field		CTO No	0011	
Project No.				N62467-98-C-009		
			CCI and CH2	M Hill Man-hours		73 (97)
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Super Site Remedia		ation Sites 16 & 38	14 1/2
Ryan Bitely	CH2M Hill	32814	QAM	Site Remedia	ation Sites 16 & 38	10 ½
Beth Liu	CH2M Hill	31158	ENG SRS O & 1		M Site 4	0
					Total Man-hours Today	25
					Total Man-hours This Year	736
			Subcontrac	or Man-hours		
Employee	Employer	Employee No.	Title/Trad	e Work Performed	Work Location	Hours Worked
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remedia	ation Sites 16 & 38	14 1/2
Rockie Stoeffler	JJ Sosa	JJS-04	EO	Site Remedia	ation Sites 16 & 38	14 1/2
			***		Total Man-hours Today	29
					Total Man-hours This Year	374

#### **Report Comments:**

- JJS loaded one Brinson Sand & Gravel trucks with soil from Site 16. The truck departed site with approximately 20 tons of soil, for disposal at WM Springhill Landfill.
- The excavation at Site 16 was nearly backfilled and compacted, however it was lacking about 15 yd3 of soil.
- JJS installed an additional pallet of sod at Site 6 to cover the area outside the excavation that had been disturbed.
- JJS Pressure washed their equipment in preparation for demobilization.

Scott Dunbar	5/16/2002
Site Superintendent's Signature	Date



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

	1							
Date:	<u> </u>	7/02		Report No:			468	
Project Name/Location:	NASV		g Field		CTO No 0011			
Project No.	151168 Contract No: N62467-98-C-0					-C-0095		
Task/Activity/Site:		Sites 4, 6, 16, & 38						
Site Superintendent:	Scott I			Site Safety C	Officer:		Scott Du	nbar
AM Weather:	Warm, Humid	, Clou	dy, Calm	PM Weather	T	H	ot, Humid, Cl	oudy, Calm
Min Temp (°F):		6		Max Temp (			85	
		4				inger Pal-	Yes	No
	Was A Job Safety Me (If Yes, attach copy of the meet			?			×	
	Were There Any Los (If Yes, attach copy of complete			s Date?				Ø
CCI Total W	Vorked Hours:		10		JA Jones Total Work	ed Ho	urs:	0
Subcontractor(s)	Total Worked Hours:		10	Tota	l Worked Hours on Jo	b Site	This Date:	20
Cumulative Total of Work I	Hours From Previous R	eport:	10164	Total	Work Hours From Sta	rt of Co	onstruction:	10184
Was Trenching/Scaffold/HV (If Yes, attach statement or checklist show	Electrical/High Work Doing inspection performed)	one?						Ø
Was Hazardous Material/Wa (If Yes, attach description of incident and p	aste Released Into The proposed action)	Environ	ment?		·			Ø
Have Safety Requirements E	Been Met?						⊠	
List Safety Violations, Correct	ctive Instructions Given	. Correc	tive Actions 1	Taken and Resul	ts of Safety Inspection	s Con	ducted:	<u> </u>
The daily tailgate safety								
	e de la companya de l	CONCERN TO SHARE	rando proce Mentingago escale su despensa de la compansa del compansa de la compansa de la compansa del compansa de la compans	nd Material Rec		Salen i		
<u> </u>	Equipment / Materi	A 80 YO MARKET PARK			Equipment No		1	/olume/Weight
Rackfi	ill soil from on base		vu nit		Equipment No		<u> </u>	
DACKI	in son from on base			and Plant Equip		04 (M)	The converse The converse	0 yd³
Plant/Equipme	ent A	mived	Departed	Safety Check		2.111.111.01.111	mber of Hours	
t land Equipm	7	iliveu	Departeu	Performed By		Nur	Idle	Danair
Navy SRS		I O-			Useu		lale	Repair
Navy 500 gal. pl		In Op	eration		24	-		
· · · · · · · · · · · · · · · · · · ·								
Navy SAR sys								
CCI Pick-up and		700	1200	SD	5	-		
CH2M Hill P		700	1200	RB	5	_		
JJS Van & To		700	1200	JW	5	-		
JJS Chainsa								
JJS Generat								
JJS Pressure W						1		
JJS Backho		700	1200	RS	5			*****
JJS 5 yd <sup>3</sup> Dump		700	1200	RS	5			
JJS Loader 2 ½	$y d^3$ 0	700	1200	RS	5			
JJS 55-gal. Dri	ums				2		2	
Backfill So	1				20 yd <sup>3</sup>			
Changed Conditions/Delays/	Conflicts Encountered:	(List any co	onflicts with the deliv	ery order (i.e., scope of v	work and/or drawings], delays to the	he project	attributable to site, and v	veather conditions, etc.)
None Noted Today						-		
Visitors to the Site:		*****		***				1.0
None Noted Today								



(ATTACH ADDITIONAL SHEETS AS NECESSARY)

Date:		05/17/02		Report No:	468	
Project Name/Location	n:	NAS Whiting Field		CTO No	0011	
Project No.		151168		Contract No:	N62467-98-C-009	5
			CCI and CH2	M Hill Man-hours		
Employee	Employer	Employee No.	Title/Trade	Work Performed	Work Location	Hours Worked
Scott Dunbar	CCI	18507	Super	Site Remediation	Sites 6, 16, 38	5
Ryan Bitely	CH2M Hill	32814	QAM	Site Remediation		5
Beth Liu	CH2M Hill	31158	ENG	SRS O & M	Site 4	0
					Total Man-hours Today	10
				Tot	al Man-hours This Year	748
			Subcontract	or Man-hours		ñ.
Employee	Employer	Employee No.	Title/Trade	e Work Performed	Work Location	Hours Worked
Josh Wallace	JJ Sosa	JJS-01	PM/Sup	Site Remediation	Sites 6, 16, 38	5
Rockie Stoeffler	JJ Sosa	JJS-04	EO	Site Remediation		5
					Total Man-hours Today	10
				Tot	al Man-hours This Year	384

#### **Report Comments:**

- JJS finished backfilling, compacting and grading Site 16. The area was cleaned up and prepared for demobilization.
- JJS fertilized the newly installed sod with triple 13 lawn fertilizer.
- JJS demobilized the project

Scott Dunbar	5/17/2002
Site Superintendent's Signature	Date



Date:		05/01/02	Report No:		214	*****		
<del></del>	ame/Location:	NAS Whiting Field		CTO No				
Project No		151168	Contract No:					
Task/Activ			Sampling; push SVE wells to dee					
	C Manager:	Ryan Bitely	QC Inspector:	p interval	N/A			
1 TOJOUT GE			BLE FEATURES OF WORK ST	TATIIS	IVA			
DFOW		Definable Feature		Prepa	ratory T	Initial	Follow-Up	
No.	(At	tach Checklist for Each Defi		Пера	latory	IIIIICI	I ollow-op	
1	,	Soil Samp					$\boxtimes$	
2	P	oush SVE wells from interme	ediate to deep interval				$\boxtimes$	
3		Vapor Sam	oling				$\boxtimes$	
4						Ц		
5					+		<b>                                     </b>	
6 7					╣		<del>                                     </del>	
8				-	╅──┼	<del>-                                    </del>	<del>-  </del>	
9				╁	┪──┼		<del>                                     </del>	
10					i	П		
11					<u> </u>			
12								
13								
14								
15								
DFOW	Dhana	THE THE PROPERTY OF THE PROPER	BLE FEATURE OF WORK COM					
No.	Phase		Comment/Find	Ing/Action				
1	Follow-up		push to 18', collect samples 011 OS-S-72'-Q3, and collect pre- and					
2	Follow-up	Remove SRS units and	use DPT rig to push variable dep	th inner wel	ls from in	termediate to	deep intervals in	
	•		ations; cut well stick-up to approp h due to increased vapor output					
3	Follow-up		om 04-TW-01 and 04-TW-02 from interval	m the interm				
			anorvo	41				
						-	<del> </del>	
				<del></del>		-		
					-			
			MPLING / TESTING PERFORME	District			abid 5 TH	
to X = 1 - AL PLANTING SQ	Sampling/Tes	ting Performed	Sampling/Testing C	@S@CCCCHhidathychiax EPc.ca.SC		Site T	echnician	
	<u>-</u>	Vapor Sampling	Accutest	Jonipany			n Bitely	
		r	7.000.001			1.90		
		•						
	···		****					
	. <del></del>	<u> </u>						
	******							
L			<u> </u>					



	MATERIAL	SINSPECTION	n pomosa, no se se se se se se se se se se se se se		States and the second
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS IN	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	n
N/A	N/A	N/A		N/A	
	OFF-SITE SURVE	ILLANCE ACTIVITIES			
Off-site surveillance activities, inclu N/A	uding action taken:				
	RI	WORK :		aria and a salah	
Rework items identified today which N/A	ch were not corrected by close of	f business:			
Rework items corrected today which	ch were on the rework items list:	;			
	REPORT	COMMENTS			
Conduct third quarter soil sampling 38'-Q3 (011-04-FD1-S-100'-Q3), 0 Q3, AND 011-04-MP-10W-S-72'-C	11-04-MP-05N-S-66'-Q3, 011-0	4-MP-10W-S-18'-Q3 (01			
	ACCUMULATION	I AREA INSPECTION		A AA LEED	
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A	1 1	· · · · · · · · · · · · · · · · · · ·		
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	anks, and Roll-Off Bo	xes	· • · · · · · · · · · · · · · · · · · ·	
				Yes	No
Are containers and tanks open		State of the second	:- ond	<u> </u>	⊠ ⊠
Are there signs of primary contact containment)?	ainment failure (rust, buiges, f	iula level arop, sneen	in 2 -		
Are there signs of compromised		oed liner, stained soil)?	?		⋈
Is there any liquid in secondary	containment?				
If any of these questions were r N/A	marked YES, please commen	ıt:			
				Yes	No
Container, tank, roll-off labeled				⊠	
"Hazardous Waste", "Non-Haza Accumulation start date marked					
Contents/waste codes marked					
Comonio vacio codes marked	5 551 Kamisi (5), tarik(5), 1011-0	(5).		1 2	<b>ا</b>



If any of these questions	were marked NO, please comment	l:				
N/A						
	Soil	Stockpiles				
	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Yes		No	
Liner secure and intact?						
Cover in place and secu	re (as necessary)?	1 111 100				
If any of these questions	were marked NO, please comment	:				
N/A						
	Accum	ulation Area				
			Yes		No	
Is the accumulation area	a free of severe structural deteriorati	on?	×			
Is there adequate aisle s	space between drums to allow unob	structed movement?	⊠			
If any of these questions	were marked NO, please commen	:	<u> </u>			
N/A						
	Emergency Re	esponse Equipment				
			Yes ⊠	No	NA_	
Telephone/Radios	Easily accessible in case of emergency?					
relephone/Hadios	In working order?					
	Is unused absorbent material nearby?				×	
Spill Control	Is personnel protective equipment available?					
	Is a fire extinguisher readily ac	ccessible?	⊠			
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	⊠			
If any of these questions N/A	s were marked NO, please comment	t:		•		
	Correc	ctive Action			<u>,                                      </u>	
Describe actions taken t	o correct any deficiency noted abov	e:				
correct, and equipment an	that this report is complete and d material used, and work performed d is in compliance with the contract	Ryan Bitely		05/0	1/02	
drawings and specifications to the best of my knowledge, except as noted in this report.  Project QC Manager' Signature				Da	te	



Date:		05/02/02	Report No:	215	5		
Project Na	ame/Location:	NAS Whiting Field	CTO No	011			
Project No		151168	Contract No:		N62467-98-D-0995		
Task/Activ			ads; begin dig permit for JJSA		2107 00 2 0000		
	C Manager:	Ryan Bitely	QC Inspector:	N/A	1		
	erajes,		ABLE FEATURES OF WORK ST				
DFOW		Definable Featur	THE RESERVE OF THE PARTY OF THE	Preparatory	y Initial	Follow-Up	
No.	(At	tach Checklist for Each Def	inable Feature of Work)		,	1 5	
1		Re-install SRS un				$\boxtimes$	
2	·	Begin Dig Permi	t for JJSA			$\boxtimes$	
3				_			
5				<u> </u>	<del>                                      </del>	<del>                                     </del>	
6				+		<del>                                     </del>	
7					+ +		
8					<del>                                     </del>	<del>†  </del>	
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12 13						<del> </del>	
14		14.16		<del>                                     </del>	<del>                                     </del>		
15				<del>                                     </del>		<del>                                     </del>	
		DEFINAL TO THE DEFINAL	BLE FEATURE OF WORK COMM	MENTS			
DFOW	Phase		Comment/Findin			10 7 de 10	
No.	F 11	0. 40 400					
1	Follow-up	Site 4 Replace SRS units	s onto concrete pads and clamp st	tick-up to blower	rs; attach bolts and	d electrical wiring	
2	Follow-up	Begin dia	permit process for Sites 6, 16, an	d 38 excavation	to begin next wee	2k	
			, , , , , , , , , , , , , , , , , , ,	a co oxidatation	to bogiii noxt wet	, , , , , , , , , , , , , , , , , , ,	
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				·			
		**************************************					
			IPLING / TESTING PERFORMED				
**		ting Performed	Sampling/Testing Co	mpany		echnician	
	N	/A	N/A			N/A	
	· ·.						
	· · · · · · · · · · · · · · · · · · ·						
-							



	MATERIAL:	SINSPECTION			etenelle Selektriker
Materials received and inspected a	gainst specifications:				
N/A					
	SUBMITTALS INS	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	n
N/A	N/A	N/A		N/A	1
	OFF-SITE SURVE	LLANCE ACTIVITIES			
Off-site surveillance activities, inclu					
N/A					
	RE	WORK			
Rework items identified today whic	h were not corrected by close of	business:			
N/A					
Rework items corrected today which	th were on the rework items list::				
N/A					
		COMMENTS			
Replace SRS units on wells and re	-attach blowers to stick-up; begii	n dig permit process for	excavations ne	ext week at Sites	6, 16, and 38
	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A	•			
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?					⊠
Are there signs of primary contact containment)?	ninment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		☒
Are there signs of compromised	secondary containment (ripp	ed liner, stained soil)?			
Is there any liquid in secondary	containment?				
If any of these questions were n N/A	narked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled?					
"Hazardous Waste", "Non-Haza				<u> </u>	_
Accumulation start date marked	on container(s), tank(s), roll-	off(s)?			
Contents/waste codes marked of	on container(s), tank(s), roll-of	f(s)?			



If any of these questions	were marked NO, please comment	:		·	
N/A					
	Soil S	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secu	re (as necessary)?				
If any of these questions	were marked NO, please comment	t:			
N/A					
	Accum	ulation Area	1. <del>0.</del>		
			Yes		No
Is the accumulation area	a free of severe structural deteriorati	on?	⊠		
Is there adequate aisle s	space between drums to allow unob	structed movement?	☒		
If any of these questions	were marked NO, please commen	t:			
N/A					
	Emergency Re	esponse Equipment		-	
			Yes	No	NA
	Easily accessible in case of emergency?				
Telephone/Radios	In working order?				
	Is unused absorbent material nearby?				⋈
Spill Control	Is personnel protective equipr	ment available?	×		
	Is a fire extinguisher readily a	ccessible?	⊠		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	⊠		
If any of these questions N/A	s were marked NO, please commen	t:			
	Corre	ctive Action	· · · · ·		
Describe actions taken t N/A	to correct any deficiency noted abov	ve:			
On behalf of CCI, I certify to correct, and equipment and during this reporting period	Ryan Bitely		05/0	2/02	
	s to the best of my knowledge,	Project QC Manager' Signature	Date		



Date:		05/03/02	Report No:	Report No: 216			16		
Project N	ame/Location:	NAS Whiting Field				011			
Project N		151168		Contract No: N6246					
Task/Acti			ess; change blower direction		1	00 0 0000			
	C Manager:	Ryan Bitely	QC Inspecto		N/A				
110			ABLE FEATURES OF WOR						
DFOW		Definable Featur			ratory	Initial	Follow-Up		
No.		tach Checklist for Each Det	inable Feature of Work)	1.196		mila	1 011011 05		
1	С	ontinue dig permit process					$\boxtimes$		
2		Change blower direc	tions at Site 4				$\boxtimes$		
3 4	<u> </u>			<u>_</u>					
5					╡	<u> </u>			
6	· · · · · · · · · · · · · · · · · · ·				╡				
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14 15					<del>                                     </del>	<u> </u>	<u> </u>		
10		DEFINA	BLE FEATURE OF WORK (						
DFOW	Phase	Tabasi Axii - A Sistema		Finding/Action					
No.			Comment	Tillding/Action					
1	Follow-up	Continue and complete of	fig permit for Sites 6, 16, and	38; obtain all ne	ecessary	signatures for	excavations next		
2	Follow-up	Change blower direction	s on SRS units 04-TW-01, 0	week 3. 04. and 05 to i	oull direct	ion for three d	av EPA sampling		
				-,,			<u>.,,</u>		
			···	<u>-</u>					
	-			<del></del>					
46 44 OC 133	STATE OF THE SHIP OF THE					PARTITION ASSESSMENT OF THE PARTITION OF			
			MPLING / TESTING PERFO						
		ting Performed	Sampling/Testi				echnician		
	N	/A	N//	Α			N/A		
		- 14	ļ						
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	MATERIAL	S INSPECTION	Allagi		
Materials received and inspected N/A	against specifications:				
	SUBMITTALS IN:	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Acti	ion
N/A	N/A	N/A	•	N/	A
	OFF-SITE SURVE	LANCE ACTIVITIES			
Off-site surveillance activities, incl N/A	uding action taken:				
	A LANGE	WORK			
Rework items identified today which N/A	ch were not corrected by close of	business:	· <del>-</del>		
Rework items corrected today whin N/A	ch were on the rework items list::				· · · · · · · · · · · · · · · · · · ·
	18:50.67	COMMENTS			
Continue and complete dig permit direction for 3-day EPA testing	COMPANY OF A THE PROPERTY OF T	DEFINE THE RESERVE OF THE PROPERTY OF THE PROP	ections on 04	-TW-01, 03, 04, a	nd 05 to pull
	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A	ALTONOMIC AND AL	
Accumulation Area Location:	N/A		<u> </u>	"	<u>-</u> -
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open					Ø
Are there signs of primary conta containment)?	ainment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		$\boxtimes$
Are there signs of compromised	d secondary containment (ripp	ed liner, stained soil)?	)		$\boxtimes$
Is there any liquid in secondary					$\boxtimes$
If any of these questions were r N/A	narked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza		lina"		Yes 🖂	No 🗆
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza Accumulation start date marked	rdous Waste", "Analysis Pend				



If any of these questions we	ere marked NO, please commen	t:				
N/A						
	Soil	Stockpiles			<del></del>	
			Yes		No	
Liner secure and intact?						
Cover in place and secure (	as necessary)?					
	re marked NO, please commen	t:				
N/A						
	Accum	ulation Area				
			Yes		No	
Is the accumulation area fre	e of severe structural deteriorat	ion?	×			
Is there adequate aisle space	ce between drums to allow unob	structed movement?	⊠			
	re marked NO, please commen	t:				
N/A						
	Emergency Ro	esponse Equipment				
:			Yes	No	NA	
Telephone/Radios	Easily accessible in case of e	mergency?				
releptione/riadios	In working order?		×			
	Is unused absorbent material	nearby?			×	
Spill Control	Is personnel protective equipr	nent available?	X			
	Is a fire extinguisher readily a	ccessible?	X			
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	X			
If any of these questions we N/A	re marked NO, please commen	t:				
	Corre	ctive Action		·		
Describe actions taken to co N/A	prrect any deficiency noted abov	e:				
correct, and equipment and ma	On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract  Ryan Bitely  05/03/02					
	drawings and specifications to the best of my knowledge,  Project QC Manager' Signature  Date					



Date:	05/04/02	Report No:	217				
Project Name/Location	: NAS Whiting Field	CTO No	011	011			
Project No.	151168	Contract No:	N6246	7-98-D-0995			
Task/Activity/Site:	No Site Activities Conducted	d today					
Project QC Manager:	Ryan Bitely	QC Inspector:	N/A				
	DEFINAE	LE FEATURES OF WORK ST	TATUS				
DFOW	Definable Feature		Preparatory	Initial	Follow-Up		
No.	(Attach Checklist for Each Defina						
1	No Site Activities Cond	ucted today					
2					<del>                                     </del>		
3 4					<del>                                     </del>		
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12					<del>                                     </del>		
13					<del>                                     </del>		
14 15							
	DEFINABL	E FEATURE OF WORK COM	MENTS &				
DFOW Phase		Comment/Find					
No.							
					*		
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				(M. 1971.)			
			····				
	SAM	PLING / TESTING PERFORM	ED 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Sampling/	Testing Performed	Sampling/Testing		Site '	Technician		
- Campining	N/A	N/A	<u>y</u>		N/A		
	14/1	1471			7.77.		
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l				1			



	MATERIAL	SINSPECTION			Emphrese Control of the Control of t
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS IN	SPECTION/REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Review	wed by	Actio	on
N/A	N/A	N/A		N/A	\
		See S. Allen Inhyreth See Sensors	/mpapamena 5,50,7740	· vevilero	
		ILLANCE ACTIVITIES			
Off-site surveillance activities, inclu N/A	ding action taken:				
	RE	WORK			
Rework items identified today which	n were not corrected by close of	business:			
N/A					
Rework items corrected today whic	h wore on the rework items list:				
N/A	II were on the rework items ist	•			
	REPORT	COMMENTS	### 1		
No Site Activities Conducted today					
	BOX PUREL TO THE PRESENTANCE OF THE SECOND	AREA INSPECTION			All III
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A		<u> </u>		
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	anks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?					$\boxtimes$
Are there signs of primary contacontainment)?	inment failure (rust, bulges, f	fluid level drop, sheen	in 2 <sup>nd</sup>		
Are there signs of compromised	secondary containment (ripp	oed liner, stained soil)?			X
Is there any liquid in secondary	containment?				$\boxtimes$
If any of these questions were n N/A	narked YES, please commen	t:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza		dina"			
Accumulation start date marked				×	
Contents/waste codes marked of	on container(s), tank(s), roll-o	ff(s)?		×	



If any of these questions we	ere marked NO, please comment	•			
N/A					
	Soil S	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secure (	as necessary)?				
	ere marked NO, please comment	:			
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area fre	ee of severe structural deterioration	on?	☒		
Is there adequate aisle space	ce between drums to allow unobs	structed movement?	☒		
	ere marked NO, please comment				
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Telephone/Radios	Easily accessible in case of er	nergency?			
	In working order?				
	Is unused absorbent material i	nearby?			
Spill Control	Is personnel protective equipm	nent available?			
	Is a fire extinguisher readily ac	cessible?	$\boxtimes$		
Fire Protection	Is the fire extinguisher fully cha	arged and seal intact?	Ø		
If any of these questions we N/A	ere marked NO, please comment	:			
	Correc	tive Action			
Describe actions taken to co N/A	orrect any deficiency noted above	e:			
during this reporting period is in	aterial used, and work performed n compliance with the contract	Ryan Bitely		05/04	1/02
drawings and specifications to except as noted in this report.	the best of my knowledge,	Project QC Manager' Signature		Dat	te



		T				
Date:		05/05/02	Report No:			
Project Na	ame/Location:	NAS Whiting Field	CTO No	011		
Project No	0.	151168	Contract No:	N6246	7-98-D-0995	
Task/Activ	vity/Site:	No Site Activities Conducte	ed today			
Project Q	C Manager:	Ryan Bitely	QC Inspector:	N/A		
			BLE FEATURES OF WORK ST		<b>非非是直接</b>	(Carrent)
DFOW		Definable Feature		Preparatory	Initial	Follow-Up
No.	(At	tach Checklist for Each Defin		, roparatory	miliai	l rollow op
1		No Site Activities Con-				
2						
3						
4						
5						
6				<u> </u>		
7 8					<u> </u>	<del>                                     </del>
9				<del>                                     </del>	<u> </u>	
10				<del> </del>		<del>                                     </del>
11			1 14 10 11	<del>                                     </del>		
12						<del>                                     </del>
13						
14						
15						
		DEFINAB	LE FEATURE OF WORK COMM			
DFOW	Phase		Comment/Findir	ng/Action		
No.						
					· · · · · · · · · · · · · · · · · · ·	***
				. 1991		
				-	**	
X				January 1 (4) (4) (4) (4) (4) (4) (4) (4) (4) (4)		y.u
			PLING / TESTING PERFORME	The state of the s		
		sting Performed	Sampling/Testing Co	ompany	Site T	echnician
		I/A	N/A			N/A
					1	



	MATERIALS	INSPECTION			
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS INS	PECTION / REVIEW			44111
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	on
N/A	N/A	N/A		N/A	4
Off-site surveillance activities, inclu	and the Average will be a second of the seco	LLANCE ACTIVITIES			
N/A					
	REV	WORK			
Rework items identified today which	h were not corrected by close of	business:	· · · · · · · · · · · · · · · · · · ·		
N/A					
Rework items corrected today whic	ch were on the rework items list::				
N/A					
	REPORT	COMMENTS			
No Site Activities Conducted today					
- Summerce in	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A		•		<del></del>
No. of Containers:	N/A	No. of Tanks:	N/A	•	
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		· · · · · · · · · · · · · · · · · · ·
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?			nd		
Are there signs of primary contacontainment)?	inment failure (rust, bulges, flu	uid level drop, sheen	in 2 <sup>nd</sup>		
Are there signs of compromised	secondary containment (rippe	ed liner, stained soil)?	<del> </del>		$\boxtimes$
Is there any liquid in secondary	containment?				×
If any of these questions were mN/A	narked YES, please comment:	:			
			<del>.</del>	Yes	No
Container, tank, roll-off labeled?				⊠	
"Hazardous Waste", "Non-Hazar					·
Accumulation start date marked	on container(s), tank(s), roll-o	off(s)?		⊠	
Contents/waste codes marked o	on container(s), tank(s), roll-off	f(s)?		$\boxtimes$	



					*
If any of these questions	were marked NO, please comment	<b>t:</b>			
N/A					
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secure	e (as necessary)?				
	were marked NO, please commen	t:			
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deteriorati	on?			
Is there adequate aisle sp	pace between drums to allow unob	structed movement?	⊠		
If any of these questions	were marked NO, please commen	t:	•		
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Telephone/Radios	Easily accessible in case of e	Easily accessible in case of emergency?			
Telephone/Radios	In working order?		×		
	Is unused absorbent material nearby?				$\boxtimes$
Spill Control	Is personnel protective equipment	nent available?	⊠		
	Is a fire extinguisher readily ac	ccessible?	Ø		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	☒		
If any of these questions N/A	were marked NO, please commen	t:	•		
	Correc	ctive Action			
Describe actions taken to N/A	correct any deficiency noted abov	e:			
correct, and equipment and during this reporting period	at this report is complete and material used, and work performed is in compliance with the contract	Ryan Bitely		05/0	5/02
drawings and specifications except as noted in this repo	to the best of my knowledge, rt.	Project QC Manager' Signature	•	Da	te



Date:		05/06/02	Report No:		219		
	ame/Location:	NAS Whiting Field		CTO No <b>011</b>			
Project N		151168		Contract No: N62467			
Task/Acti			ep; begin three day EPA Vapor S			-0000	
	C Manager:	Ryan Bitely	QC Inspector:		N/A		
110,601 G	O Manager.		BLE FEATURES OF WORK STA		The state of the s		
DFOW		Definable Feature		Prepara	tony I Ini	tial	Follow-Up
No.	(At	tach Checklist for Each Defir		Tiepaid	iiiii	liai	1 Ollow-op
1		cuss excavation plans with J				<b>d</b>	
2	Be	gin Three day EPA Vapor Sa	ampling event at Site 4				$\boxtimes$
3							
<u>4</u> 5				<del>                                     </del>		-	
6						=	
7							
8			7.7.1	$\vdash$		7	
9						_	
10							
11							
12							
13	· · · · · · · · · · · · · · · · · · ·						
14				<u> </u>			<u> </u>
15		DEFINAR	LE FEATURE OF WORK COMM	IENTO			
DFOW	Phase	DEFINAB	Comment/Findin		St. 21 sate #24#		
No.	i iidoo		Comments main	ig/Action			
1	Initial	Discuss excavation plans f	or Sites 6, 16, and 38 with Josh V	Nallace/J.J.S	Sosa, Inc.; tak	e Josh to	see each of the
			sites and assist in any set	t-up needs h	e has		
2	Follow-up	Begin three day EPA va	por sampling event at Site 4; col		apor samples a	at each o	f the five SRS
			vapor wel	IIS			
							· · · · · · · · · · · · · · · · · · ·
				-···· · · · · · · · · · · · · · · · · ·			
							<del></del>
			1				
					<u> </u>		
		SAN	PLING / TESTING PERFORME	0			
	Sampling/Tes	ting Performed	Sampling/Testing Co	DA		Site Te	chnician
		Testing	Accutest	p)			Bitely
			7.000.000			,	· Ditory
			L		1		



	MATERIAL	S INSPECTION	45111	idlen:	
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS IN	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	ewed by	Acti	on
N/A	N/A	N/A		N/	A
	Displayed the second se	ILLANCE ACTIVITIES			
Off-site surveillance activities, inclu N/A	ding action taken:				
	RE	WORK	Hay some Lagran		
Rework items identified today whic N/A	h were not corrected by close of	business:			
Rework items corrected today which N/A	h were on the rework items list::				
	REPORT	COMMENTS			
Discuss upcoming Excavation with EPA sampling	J. J. Sosa representative, Josh	Wallace; collect five te	dlar vapor sam	ples for beginning	g of three day
	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		A STATE OF THE STA
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	oxes		
	W. C. C. C. C. C. C. C. C. C. C. C. C. C.			Yes	No
Are containers and tanks open?				<u> </u>	
Are there signs of primary conta containment)?	inment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>na</sup>		☒
Are there signs of compromised		ed liner, stained soil)	?		
Is there any liquid in secondary					$\square$
If any of these questions were n N/A	narked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazar		ling"		⊠	
Accumulation start date marked				⊠	
Contents/waste codes marked of	on container(s), tank(s), roll-of	f(s)?		⊠	



If any of these questions	were marked NO, please comment	t:			
N/A					
	Soil 9	Stockpiles			
			Yes	;	No
Liner secure and intact?					
Cover in place and secu	re (as necessary)?				
If any of these questions	were marked NO, please comment	t:			
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deterioration	on?	$\boxtimes$		
Is there adequate aisle s	pace between drums to allow unob	structed movement?	⊠		
If any of these questions	were marked NO, please comment	t:			
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Telephone/Radios	Easily accessible in case of er	mergency?			
Telephone/Radios	In working order?				
	Is unused absorbent material	nearby?			×
Spill Control	Is personnel protective equipment	nent available?	☒		
	Is a fire extinguisher readily ac	ccessible?	⋈		
Fire Protection	Is the fire extinguisher fully cha	arged and seal intact?	☒		
If any of these questions N/A	were marked NO, please comment	t:		<u></u>	
	Correc	ctive Action			
Describe actions taken to N/A	o correct any deficiency noted above	e:			
correct, and equipment and	hat this report is complete and d material used, and work performed is in compliance with the contract	Ryan Bitely		05/0	6/02
	s to the best of my knowledge,	Project QC Manager' Signature	)	Da	ite



Date:	05/07/02	Report No:	220		
Project Name/Location:	NAS Whiting Field	CTO No	011		
Project No.	151168	Contract No:	N624	67-98-D-0995	
Task/Activity/Site:	Continue three day EPA va	por sampling at Site 4; measure	flow rates and pre	essures, downlo	ad data
Project QC Manager:	Ryan Bitely	QC Inspector:	N/A		
A Part of the American Control	DEFINAL	BLE FEATURES OF WORK ST	ATUS -		
DFOW	Definable Feature	Of Work	Preparatory	Initial	Follow-Up
No. (A	Attach Checklist for Each Defin	able Feature of Work)	' '		1
1	Continue three day EPA vapo				
2	Measure Pressures an				$\square$
3	Download data from				
4	Discuss excavation wi	th J. J. Sosa			
5			<u> </u>		
6			<u> </u>		<u> </u>
7			<u> </u>		<u> </u>
8					<del>                                     </del>
9 10		100 100 100 100 100 100 100 100 100 100			
11				<u> </u>	<del>                                     </del>
12			<u> </u>		╀┈┼
13			<u> </u>		<del>                                     </del>
14	**************************************				+ $+$
15				H	<del>                                     </del>
	DEFINAB	E FEATURE OF WORK COMM	JENTS		
DFOW Phase		Comment/Findir			
No.			.97.00.011		
1 Follow-up		Continue EPA three day vapor	sampling event at	Site 4	
2 Follow-up		Measure flow rates and p	ressures at Site 4		
3 Follow-up		Download data fron			
4 Follow-up	Disc	cuss upcoming excavation with c	Josh Wallace from	J. J. Sosa	
					·
				·	
	CAN	PLING/TESTING PERFORME			
Compling/To	esting Performed		The state of the s	O:4- T	
		Sampling/Testing Co	ompany		echnician
vapo	r Testing	Accutest		Rya	ın Bitely
				1	



N/A	against specifications:				
A. Sill. David Grand Co.	QUEULTA QUE	PRECTION / PEVIEW			
		SPECTION / REVIEW		A shi	
Submittal No	Spec/Plan Reference	Inspected/Revie	wea by	Actio	
N/A	N/A	N/A		N/A	· · · · · · · · · · · · · · · · · · ·
	OFF STESURVE	LLANCE ACTIVITIES			
Off-site surveillance activities, inclu			and the second s		
N/A 					
		WORK			
Rework items identified today whic N/A	h were not corrected by close of	business:			
Rework items corrected today whice N/A	ch were on the rework items list::			and the second s	
	REPORT	COMMENTS		No.	WATER TO BE SHOWN
Discuss upcoming Excavation with EPA sampling; download data from				ples for beginning	of three day
		AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		-Parkershald (2 ) ( 41 11 17 11 17 17 17 18 17 18 17 18 17 18 17 18 17 18 17 18 17 18 17 18 17 18 17 18 17 18
Accumulation Area Location:	N/A	•			
No. of Containers:					****
	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A N/A	No. of Tanks: No. of Drums:	N/A N/A		Market M. L. and
No. of Roll-Off Boxes:		No. of Drums:	N/A		114-4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A	Yes	No
	N/A <b>Waste Containers, Ta</b>	No. of Drums:	N/A	Yes	No ⊠
Are containers and tanks open? Are there signs of primary conta	N/A Waste Containers, Ta	No. of Drums: nks, and Roll-Off Bo	N/A exes		
Are containers and tanks open? Are there signs of primary contacontainment)?	N/A  Waste Containers, Ta  Painment failure (rust, bulges, fl	No. of Drums: nks, and Roll-Off Bo	N/A  xes  in 2 <sup>nd</sup>		⊠
Are containers and tanks open?	N/A  Waste Containers, Ta  Painment failure (rust, bulges, fleet secondary containment (ripper)	No. of Drums: nks, and Roll-Off Bo	N/A  xes  in 2 <sup>nd</sup>		×
Are containers and tanks open? Are there signs of primary contacontainment)? Are there signs of compromised is there any liquid in secondary if any of these questions were not secondary.	N/A  Waste Containers, Ta  Painment failure (rust, bulges, fluctuations)  disecondary containment (ripper containment?	No. of Drums: nks, and Roll-Off Bo uid level drop, sheen ed liner, stained soil)?	N/A  xes  in 2 <sup>nd</sup>		
Are containers and tanks open? Are there signs of primary contacontainment)? Are there signs of compromised is there any liquid in secondary if any of these questions were not secondary.	N/A  Waste Containers, Ta  Painment failure (rust, bulges, fluctuations)  disecondary containment (ripper containment?	No. of Drums: nks, and Roll-Off Bo uid level drop, sheen ed liner, stained soil)?	N/A  xes  in 2 <sup>nd</sup>		
Are containers and tanks open? Are there signs of primary contacontainment)? Are there signs of compromised is there any liquid in secondary if any of these questions were n N/A  Container, tank, roll-off labeled?	N/A  Waste Containers, Ta  Rainment failure (rust, bulges, fleet secondary containment (ripper containment?  marked YES, please comment	No. of Drums: nks, and Roll-Off Bo uid level drop, sheen ed liner, stained soil)?	N/A  xes  in 2 <sup>nd</sup>		
Are containers and tanks open? Are there signs of primary contacontainment)? Are there signs of compromised is there any liquid in secondary if any of these questions were now.	N/A  Waste Containers, Ta  Painment failure (rust, bulges, fleet secondary containment (ripper containment?  marked YES, please comment  Pardous Waste", "Analysis Pend	No. of Drums: nks, and Roll-Off Bo uid level drop, sheen ed liner, stained soil)? :	N/A  xes  in 2 <sup>nd</sup>	Yes	⊠ ⊠ ⊠



If any of these questions	were marked NO, please comment	t:			
N/A					
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secu	re (as necessary)?				
If any of these questions	were marked NO, please comment	<b>!</b>		<u> </u>	
N/A					
	Accum	ulation Area			<u></u>
			Yes		No
Is the accumulation area	a free of severe structural deteriorati	on?	⊠		
Is there adequate aisle s	space between drums to allow unob	structed movement?	⊠		
If any of these questions	were marked NO, please comment	:			
N/A					
	Emergency Re	esponse Equipment	********		
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?				
Totophono/Hadioo	In working order?	In working order?			
	Is unused absorbent material	nearby?			⊠
Spill Control	Is personnel protective equipm	nent available?	×		
	Is a fire extinguisher readily ac	ccessible?	⋈		
Fire Protection	Is the fire extinguisher fully cha	arged and seal intact?	⊠		
If any of these questions N/A	were marked NO, please comment	t:	•		•
TANK II.	Correc	ctive Action			
Describe actions taken to N/A	o correct any deficiency noted above	e:			
correct, and equipment and during this reporting period	hat this report is complete and d material used, and work performed i is in compliance with the contract	Ryan Bitely		05/07	7/02
drawings and specifications except as noted in this repo	s to the best of my knowledge, ort.	Project QC Manager' Signature	•	Da	te



Date:		05/08/02	Report No:		221		
Project Na	ame/Location:	NAS Whiting Field	CTO No		011		
Project No	0.	151168	Contract No	D:	N6246	7-98-D-0995	
Task/Activ	vity/Site:	Begin Excavation at Site 16	; Complete three day EP	A sampling at Si			
Project Q	C Manager:	Ryan Bitely	QC Inspect		N/A		
# 25-67			LE FEATURES OF WO				
DFOW		Definable Feature	Of Work	Prepa	aratory	Initial	Follow-Up
No.	(At	tach Checklist for Each Defin					<u>'</u>
1		Begin excavation a					$\boxtimes$
3		Complete three day EPA s	ampling at Site 4		4		
4							
5					+ -		
6					=		
7					<u> </u>		
8							
9							
10 11					┪		
12					╡		
13					┪		
14					<del>1</del>		<del>                                      </del>
15			<u> </u>		5 1		
		DEFINABL	E FEATURE OF WORK	COMMENTS	F. Jak		
DFOW	Phase		Commen	t/Finding/Action			
No.							
1	Follow-up	J. J. Sosa begins excavati	on at Site 16; Hertz deliv	ers back-hoe and	dump tru	ck to site, load	ler not delivered;
		JJSA begins clearing site	of brush and debris; delin	eate site bounda	ries and c	ut down single	pine in center of
		site using chain saw with p		npiete day by tra ging area	nsporting	clean till trom i	porrow pit to site
2	Follow-up		Conclude three da		at site 4		
				,			
		<u></u>			· ·		
						<del></del>	
	**						
-							
						7.7.4	
a sales s							
			PLING / TESTING PERF	Chicago and Chicag			
		ting Performed		ting Company			echnician
	Vapor	Testing	Acc	utest		Rya	n Bitely
			·				



Materials received and inspected a		S INSPECTION			
	SUBMITTALS IN	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	ewed by	Acti	on
N/A	N/A	N/A		N/.	
Off-site surveillance activities, inclu	A CONTRACTOR CONTRACTO	LLANCE ACTIVITIES			
N/A	uding action taken:				
	RE	WORK -			
Rework items identified today which N/A	h were not corrected by close of	business:			
Rework items corrected today which N/A	ch were on the rework items list::			, , , , , , , , , , , , , , , , , , , ,	
	REPORT	COMMENTS	eris jako kanananan		
Begin Site 16 excavation; clear site	98 T. VA.		e clean fill on-	site for backfill; c	omplete
	ACCUMULATION	AREA INSPECTION		(***)	
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A	inspector.			
No. of Containers:	N/A	No. of Tanks:	N/A	· · · · · · · · · · · · · · · · · · ·	<del></del> -
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		<del></del> -
	Waste Containers, Ta				······································
	· · · · · · · · · · · · · · · · · · ·			Yes	No
Are containers and tanks open?					
Are there signs of primary contacontainment)?	inment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		Ø
Are there signs of compromised	secondary containment (rippe	ed liner, stained soil)?	?		☒
Is there any liquid in secondary	containment?				$\boxtimes$
If any of these questions were n N/A	narked YES, please comment	•			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza		ing"_		×	
Accumulation start date marked					
Contents/waste codes marked o	on container(s), tank(s), roll-off	(s)?			



If any of these questions	were marked NO, please commen	†•			
N/A	were marked 140, please commen	<b></b>			
	Soil 9	Stockpiles			
			Voc		No
Liner secure and intact?			Yes		No 🗆
Cover in place and secure	e (as necessary)?				
If any of these questions	were marked NO, please commen	t:		L	
N/A	,,,				
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deteriorati	on?	<i>763</i>		
Is there adequate aisle sp	ace between drums to allow unob	structed movement?	⊠		
If any of these questions	were marked NO, please commen	t:	<u> </u>		
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Talanhana/Dadias	Easily accessible in case of emergency?				
Felephone/Radios	In working order?	In working order?			
	Is unused absorbent material	nearby?			
Spill Control	Is personnel protective equipment	nent available?	⊠		
	Is a fire extinguisher readily ac	ccessible?	⊠		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	⊠		
If any of these questions v	were marked NO, please comment	t:		•	
	Correc	ctive Action			
Describe actions taken to N/A	correct any deficiency noted abov	e:			
correct, and equipment and during this reporting period is	at this report is complete and material used, and work performed s in compliance with the contract	Ryan Bitely		05/08	3/02
drawings and specifications except as noted in this repor	to the best of my knowledge, t.	Project QC Manager' Signature	)	Da	te



Date:	05/09/02	Report No:	221		
Project Name/Location:	NAS Whiting Field		CTO No 011		
Project No.	151168	Contract No:		7-98-D-0995	
Task/Activity/Site:	· <del> </del> · · · · · · · · · · · · · · · · · · ·	; Conduct intermediate interval a			
Project QC Manager:	Ryan Bitely	QC Inspector:	N/A	<del>1</del>	
Froject QC Ivianager.		LE FEATURES OF WORK STA			
DFOW	Definable Feature		Preparatory	Initial	Follow-Up
	ttach Checklist for Each Defina		Treparatory	HHUQI	1 Ollow-op
1	Continue excavation				
2 C	Conduct intermediate interval a	ir sampling at Site 4			$\boxtimes$
3					
4	<u> </u>				<u> </u>
5			<del>                                     </del>	<u> Н</u>	<u> </u>
7		· · · · · · · · · · · · · · · · · · ·			<del>                                     </del>
8					<del>                                     </del>
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10			1 7		<del>                                     </del>
11					
12					
13					
14					
15					I I I I I I I I I I I I I I I I I I I
DFOW Phase	The state of the s	E FEATURE OF WORK COMM Comment/Finding			and the Mark
No.		Comment/Finding	g/Action		
	1104				
1 Follow-up 2 Follow-up	JJSA continu	le transporting clean backfill from Conclude three day EPA s	n borrow pit to stag	ling pile at site	16;
2 Follow-up		Conclude tiffee day EPA's	sampling at site 4		
		-			
W-1-1-1					
	SAM	LING / TESTING PERFORMED			
Sampling/Tes	sting Performed	Sampling/Testing Cor		Site T	echnician
<del></del>	Testing	Accutest	inpany		n Bitely
тарог		riodicot		1 1190	51019
				<b>†</b>	
			•		
				<u> </u>	



	MATERIALS	SINSPECTION			XXXXXIII V
Materials received and inspected a N/A	gainst specifications:	The state of the s			
	SUBMITTALS INS	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Acti	on
N/A	N/A	N/A		N//	Ā
		LLANCE ACTIVITIES			111111
Off-site-surveillance activities, inclu N/A	ding action taken:				
	RE	WORK			
Rework items identified today which N/A	h were not corrected by close of	business:			
Rework items corrected today which N/A	h were on the rework items list::				
	REPORT	COMMENTS		a ka nasawanan Canada ka ma	
Begin Site 16 excavation; clear site			e clean fill on-si	ite for backfill; c	omplete
		-		ang castil company and analysis	SOLET COMMING SAME SHOP IN THE STATE OF THE
		AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?					
Are there signs of primary contacontainment)?	inment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		
Are there signs of compromised	secondary containment (rippo	ed liner, stained soil)?	>		$\boxtimes$
Is there any liquid in secondary	containment?				
If any of these questions were m N/A	narked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazar		lina"			
Accumulation start date marked					
Contents/waste codes marked of	on container(s), tank(s), roll-of	f(s)?			



[., ., ., ., ., ., ., ., ., ., ., ., ., .					
	ere marked NO, please commen	ıt:			
N/A					
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secure (					
	ere marked NO, please commen	nt:			
N/A					
<u> </u>	Accum	nulation Area			
			Yes		No
Is the accumulation area fre	ee of severe structural deteriorat	ion?	I es		
Is there adequate aisle space	ce between drums to allow unob	estructed movement?			
	ere marked NO, please commen		<u> </u>		
N/A	To Hames (10) product commen			F	
	_				
<u> </u>	Emergency Re	esponse Equipment		<del>,                                      </del>	<del></del>
	Easily accessible in second amount of		Yes	No -	NA _
Telephone/Radios	Easily accessible in case of emergency?				
	In working order?				
	Is unused absorbent material	nearby?			
Spill Control	Is personnel protective equipment	nent available?	⊠		
	Is a fire extinguisher readily ac	ccessible?	Ø		
Fire Protection	Is the fire extinguisher fully ch	larged and seal intact?	⊠		
	ere marked NO, please commen	t:		1	
N/A					
	Correc	ctive Action			
Describe actions taken to co	prrect any deficiency noted abov	/e:			
On behalf of CCI, I certify that t	this report is complete and aterial used, and work performed				-
during this reporting period is ir	n compliance with the contract	Ryan Bitely		05/09	9/02
drawings and specifications to except as noted in this report.	the best of my knowledge,	Project QC Manager' Signature	:	Dat	te



Date:		5/10/2002	Report No:	22	2		
Project Name/	Location:	NAS Whiting Field	CTO No	01	1		
Project No.		151168	Contract No:	N6	2467-98-D-0995	)	
Task/Activity/S	Site:	Backfill of Excavation	<u> </u>				
Project QC Ma		Ryan Bitely	QC Inspector:	N//	Α		
			BLE FEATURES OF WORK STA				
DFOW	*	Definable Feature	Per Carlo Ca	Preparator	v Initial	Follow-Up	
No.	(At	tach Checklist for Each Defi		F	<u> </u>		
1		Backfill of Exc	avation			$\boxtimes$	
2							
3							
4							
5 6							
7							
8				<del>                                     </del>	<del>                                     </del>		
9							
10							
11			·				
12							
13							
14							
15							
DEOM	-14 T	DEFINA	BLE FEATURE OF WORK COMM			Salar (Salaria da da da da da da da da da da da da da	
DFOW No.	Phase		Comment/Finding	g/Action			
140.	Initial	Continue backfill of excar	vation @Site 16. JJS requested th	at CCI redeline	eate Site 16 excav	ation limits again	
	milia	Obtained two confirms	ation samples from the bottom of the	e excavation	@Site 16. MS/MS[	and Pre/Post	
			Equipment Blank were				
				" .			
			MPLING / TESTING PERFORMED	(A-1-A-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1			
Sa	ampling/Tes	sting Performed	Sampling/Testing Co	mpany	Site 7	Technician	
	Vapor	Testing	Accutest		Rya	an Bitely	
<u></u>			<u> </u>				



A Description of the Control of the	MATERIALS	INSPECTION	San San San	SP Switch States of California	
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS INS	PECTION / REVIEW		er i Salador Salas III de la como de la como de la como de la como de la como de la como de la como de la como	
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	on
N/A	N/A	N/A		N/A	
	OFF-SITE SURVE	LLANCE ACTIVITIES			
Off-site surveillance activities, inclu N/A	The state of the s		en la company de la company de la company de la company de la company de la company de la company de la company		
	RE\	WORK		and the company of th	
Rework items identified today whic N/A	h were not corrected by close of	business:			
Rework items corrected today whice N/A	ch were on the rework items list::				
	REPORT	COMMENTS			
Excavating @ Site 16. Re-delineat				· · · · · · · · · · · · · · · · · · ·	
	ACCUMULATION	AREA INSPECTION		The second second second	
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
1900		·		Yes	No
Are containers and tanks open?	****	# water	n d		
Are there signs of primary contacontainment)?	ainment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		$\boxtimes$
Are there signs of compromised	secondary containment (ripp	ed liner, stained soil)'	?		×
ls there any liquid in secondary	containment?				$\boxtimes$
If any of these questions were n N/A	narked YES, please comment	:			
			· · · · · · · · · · · · · · · · · · ·	Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza		ina"		×	
Accumulation start date marked				⊠	
Contents/waste codes marked of	on container(s), tank(s), roll-of	f(s)?			



If any of these questions	were marked NO, please commen	ıt:			
N/A	, more marked ive, predect commen				
	Soil	Stockpiles			
			Yes	;	No
Liner secure and intact?					
Cover in place and secu	re (as necessary)?				
If any of these questions	were marked NO, please commen	t:		<u>'</u>	
N/A					
	Accum	nulation Area			
			Yes	;	No
Is the accumulation area	free of severe structural deteriorat	ion?	⊠		
Is there adequate aisle s	space between drums to allow unob	estructed movement?	☒		
If any of these questions	were marked NO, please commen	it:	1		
N/A					
	Emergency Ro	esponse Equipment			
			Yes	No	NA
Talambana (Dadia)	Easily accessible in case of emergency?		⊠		
Telephone/Radios	In working order?		Ø		
	Is unused absorbent material	nearby?			☒
Spill Control	Is personnel protective equipr	ment available?	⊠		
	ls a fire extinguisher readily a	ccessible?	⊠		
Fire Protection	Is the fire extinguisher fully ch	narged and seal intact?	⊠		
If any of these questions N/A	were marked NO, please commen	it:			
	Corre	ctive Action			
Describe actions taken to N/A	o correct any deficiency noted abov	ve:			•
correct, and equipment and	hat this report is complete and d material used, and work performed is in compliance with the contract	Ryan Bitely		05/1	0/02
	s to the best of my knowledge,	Project QC Manager' Signature	)	Da	ıte



Date:		5/11/2002	Report No:	223	223				
Project Name/Location:		NAS Whiting Field	CTO No	CTO No <b>011</b>					
Project No.		151168	Contract No:	Contract No: N6246		7-98-D-0995			
Task/Activity	//Site:	Excavation of Contaminate							
Project QC I		Ryan Bitely	QC Inspector:	N/A					
	F-W-1-2		BLE FEATURES OF WORK STA		Eddler				
DFOW		Definable Feature Of Work		Preparatory	Initial Follow-Up				
1		tach Checklist for Each Definable Feature of Work)				'			
1		Excavation of Contar	ninated Soil			$\boxtimes$			
2									
3									
4									
5					<u> </u>				
6 7						<u> </u>			
8									
9									
10				<u> </u>					
11				<del>                                     </del>					
12									
13									
14									
15									
		DEFINAB	LE FEATURE OF WORK COMM						
DFOW	Phase	Comment/Finding/Action							
No.	Follow-up								
'	Follow-up Continue excavation of contaminated soil @ Site 16. Stockpiling the excavated soil on with soft the site. JJS began loading Brinson Sand & Gravel trucks upon their arrival to the site.								
		disposal at WM Springh	iing brinson Sand & Gravei tri ill Landfill	ucks upon their a	rrival to the si	te and for			
		and a series of the series of							
	<del></del>		****						
			, , , , , , , , , , , , , , , , , , ,						
					Transition				
		SAM	PLING / TESTING PERFORMED						
Sampling/Testing Performed			Sampling/Testing Company		Site Technician				
NA			NA		NA				
					<u> </u>				
			L		I				



	MATERIALS	INSPECTION			
Materials received and inspected a N/A	against specifications:				SSEED 1-10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
	SUBMITTALS INS	PECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	ewed by	Action	
N/A	N/A	N/A		N/A	
				CONTRACTOR AND A STREET	
Off-site surveillance activities, inclu N/A		LLANCE ACTIVITIES			
Rework items identified today which N/A		VORK business:			
Rework items corrected today which N/A	ch were on the rework items list::				
	REPORT	OMMENTS:			
Excavating @ Site 16. JJS continudisposal.			ing it to WM :	Springhill Land	fill for
	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A	COLOR AND INVESTMENT AND A SECOND SEC	
Accumulation Area Location:	N/A			***	., e.
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Tar	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?		$\boxtimes$			
Are there signs of primary conta containment)?		×			
Are there signs of compromised		⊠			
Is there any liquid in secondary		$\boxtimes$			
If any of these questions were n N/A	narked YES, please comment:				
	Yes	No			
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza	⊠				
Accumulation start date marked					
Contents/waste codes marked o	$\boxtimes$				



-	were marked NO, please commen	t:			
N/A					
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secure (as necessary)?					
	were marked NO, please commen	t:			
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deteriorati	ion?			
Is there adequate aisle s	space between drums to allow unob	structed movement?			
If any of these questions	were marked NO, please commen	t:			
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Telephone/Radios	Easily accessible in case of emergency?				
relephone/nadios	In working order?	In working order?			
	Is unused absorbent material	nearby?			
Spill Control	Is personnel protective equipr	ment available?	Ø		
	Is a fire extinguisher readily a	ccessible?	⊠		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	⊠		
If any of these questions N/A	were marked NO, please commen	t:		•	
	Corre	ctive Action			
Describe actions taken to N/A	o correct any deficiency noted abov	ve:			M
correct, and equipment and during this reporting period	hat this report is complete and d material used, and work performed I is in compliance with the contract	Ryan Bitely		05/1	1/02
	s to the best of my knowledge,	Project QC Manager' Signature	9	Da	te



Date:		05/12/02	Report No:	1	224	
Project Name/Loc	ration:	NAS Whiting Field	CTO No			
Project No.	Jacion.	151168	Contract No:		N62467-98-D-0995	
Task/Activity/Site		No Site Activities Conduc			402407-30-D-0333	
Project QC Mana		Ryan Bitely			 V/A	
Project QC Mana	ger.		QC Inspector: ABLE FEATURES OF WORK STA			
DFOW	(	Definable Featu	And the state of t		ory Initial	Follow-Up
No.	(Att	tach Checklist for Each De		Preparat	ory I iiiuai	Fullow-up
1	1,	No Site Activities Co		1		$\vdash$
2						
3						
4						
5						
6				<del>                                     </del>		
7 8				<u> </u>		<u> </u>
9					<del>-                                     </del>	+ $+$
10					<del>-   -   -</del>	
11			***************************************			<del>                                     </del>
12		**************************************	****			
13						
14						
15	W.Y. of early W. Thinkson, 1981		VIII A SAN AND AND AND AND AND AND AND AND AND A			
DFOW PI	nase	DEFINA	BLE FEATURE OF WORK COMM Comment/Findin			
					<b>-</b>	
						<del>,</del>
					<del></del>	
					~	
	-					
	B.C.	<b>S</b> /	MPLING / TESTING PERFORME	D		
Samp	oling/Tes	ting Performed	Sampling/Testing Co	ompany	Site	Technician
		I/A	N/A	· ,		N/A
						· · · · · · · · · · · · · · · · · · ·
		7.77.10.4				<u> </u>
	<del></del>					
			1		j	



	MATERIAL	SINSPECTION	Mind .	Experience of the control of the con	
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS INS	SPECTION/ REVIEW	Andrew Louis and Andrews		The second of the second
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Action	on
N/A	N/A	N/A		N//	4
**************************************	A-FAU-OUNE				
Off-site surveillance activities, inclu- N/A		ILLANCE ACTIVITIES			
	Circumstant Car	WORK			
Rework items identified today which N/A	n were not corrected by close of	business:			
Rework items corrected today which N/A	h were on the rework items list::				
	REPORT	COMMENTS			
No Site Activities Conducted today			300 - 180 C. C. C. C. C. C. C. C. C. C. C. C. C.		
	THE CONTROL OF THE PROPERTY OF				
Language Darf		AREA INSPECTION	Tara da la la la la la la la la la la la la la		
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?					⊠
Are there signs of primary contactontainment)?	inment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>na</sup>		
Are there signs of compromised	secondary containment (ripp	ed liner, stained soil)?	)		⊠
Is there any liquid in secondary	containment?				⊠
If any of these questions were m N/A	arked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Hazar	dous Waste", "Analysis Pend	lina"		⊠	
Accumulation start date marked			<del></del>	⊠	
Contents/waste codes marked o	n container(s), tank(s), roll-of	f(s)?		⊠	



If any of these questions	were marked NO, please commen	t:			
N/A					
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secu	re (as necessary)?				
If any of these questions	were marked NO, please commen	t:	•		
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deteriorati	on?			
Is there adequate aisle s	space between drums to allow unob	structed movement?	⊠		
If any of these questions	were marked NO, please commen	t:			
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Tolophono/Padica	Easily accessible in case of e	mergency?			
Telephone/Radios	In working order?		⊠		
	Is unused absorbent material	nearby?			×
Spill Control	Is personnel protective equipr	nent available?	⊠		
	Is a fire extinguisher readily a	ccessible?	Ø		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	⊠		
If any of these questions N/A	were marked NO, please commen	t:		•	
/A.V.	Correc	ctive Action			
Describe actions taken to N/A	o correct any deficiency noted abov	e:			
correct, and equipment and	hat this report is complete and d material used, and work performed is in compliance with the contract	Ryan Bitely		05/12	2/02
	s to the best of my knowledge,	Project QC Manager' Signature	)	Da	te



Date:		5/13/2002	Report No:	22	4		
Project Na	me/Location:	NAS Whiting Field	CTO No	01	011		
Project No	).	151168	Contract No:	N6	N62467-98-D-0995		
Task/Activ	rity/Site:	Excavation of Contaminated	Soil. Backfill of Excavation				
	C Manager:	Ryan Bitely	QC Inspector:	N//	4		
116			LE FEATURES OF WORK STA	ATUS	<b>V</b> IK NOCH GEREN	-11111	
DFOW		Definable Feature	Of Work	Preparator	y Initial	Follow-Up	
No.	(At	tach Checklist for Each Defina				<u> </u>	
1		Excavation of Contam					
2		Backfill of Excav	ation			X	
3						<del>                                     </del>	
<u>4</u> 5				<u> </u>			
6						+	
7				<del>                                     </del>			
8					<del>                                     </del>		
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11	,						
12						<u> </u>	
13				<u> </u>	<u> </u>		
14 15				<del>                                     </del>	+ +		
	roto, tot	CAN DESINARI	E FEATURE OF WORK COMN	IENTO L			
DFOW	Phase	Berner Berner	Comment/Findir				
No.							
1	Follow-Up	Continue excavation @Site	38. JJS dug out the 2- 10'x10'	pits @ Site 38.	JJS loaded one B	rinson Sand &	
		Gravel truck with soil from S	ite 38 and delivered it at WM Sp	oringhill Landfill	for disposal.		
2	Fallaw via	7.5	Franciskad hash filled and as		.t.l		
	Follow-up		Excavated, back-filled and co	verea the pits w	ith sod.		
				-			
				<del></del>			
				<u>.</u>			
					,		
		SANI	LING / TESTING PERFORME			(4) 24 24 25 27 198 (4) 24 27 28 27 28 27 28 28 28 28 28 28 28 28 28 28 28 28 28	
	Sampling/Tes	sting Performed	Sampling/Testing Co	ompany	Site 7	Technician	
	<u> </u>	V/A	N/A	· ·		N/A	



	MATERIALS	INSPECTION			
Materials received and inspected a N/A	against specifications:				
STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,	SUBMITTALS INS	PECTION / REVIEW	Managaran		
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	n
N/A	N/A	N/A		N/A	1
	OFF-SITE SURVEI	LLANCE ACTIVITIES			
Off-site surveillance activities, inclu N/A	uding action taken:				
	RE\	VORK			
Rework items identified today which N/A	th were not corrected by close of	business:			
Rework items corrected today which N/A	ch were on the rework items list::	, 41			
	REPART	COMMENTS			
Excavating and Backfill of Excavat loaded one Brinson Sand & Grave	I truck with soil from the site and o	delivered it at WM Sprir	nghill Landfill for		ith sod. JJS
	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A	Value 1 to 1 to 1 to 1 to 1 to 1 to 1 to 1 t	
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?	· · · · · · · · · · · · · · · · · · ·		<u> </u>		
Are there signs of primary contact containment)?	ainment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		☒
Are there signs of compromised	d secondary containment (rippe	ed liner, stained soil)?	?		$\boxtimes$
Is there any liquid in secondary	containment?				$\boxtimes$
If any of these questions were r N/A	marked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled				⊠	
"Hazardous Waste", "Non-Haza				K71	[]
Accumulation start date marked				☒	
Contents/waste codes marked	on container(s), tank(s), roll-of	f(s)?		$\boxtimes$	



If any of these questions	were marked NO, please commen	t;			
N/A					
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secu	re (as necessary)?	.,			
	were marked NO, please commen	t:			
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deteriorati	ion?			
Is there adequate aisle s	space between drums to allow unob	structed movement?	⊠		
	were marked NO, please commen	t:		· · · · · ·	
N/A					
	Emergency Re	esponse Equipment			
			Yes	No	NA
Telephone/Radios	Easily accessible in case of e	mergency?			
relephone/rtadios	In working order?				
	Is unused absorbent material	nearby?			
Spill Control	Is personnel protective equipr	nent available?	⊠		
	Is a fire extinguisher readily a	ccessible?	×		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	×		
If any of these questions N/A	were marked NO, please commen	t:			
7	Corre	ctive Action			
Describe actions taken to N/A	o correct any deficiency noted abov	ve:			
correct, and equipment and	hat this report is complete and d material used, and work performed is in compliance with the contract	Ryan Bitely		05/1	3/02
	s to the best of my knowledge,	Project QC Manager' Signature	Э	Da	ite



		I					
Date:		05/14/02	Report No:		225		
Project Na	ame/Location:	NAS Whiting Field	CTO No	011			
Project No	0.	151168	Contract No:	N62	2467-98-D-0995		
Task/Activ	vity/Site:	Excavation of Contaminate	d Soil; Backfill of Excavation				
Project Q	C Manager:	Ryan Bitely	QC Inspector:	N/A	<b>\</b>		
141		DEFINA	BLE FEATURES OF WORK STA	TUS		H. B. Grandskin in	
DFOW		Definable Feature	Of Work	Preparatory	Initial	Follow-Up	
No.	(At	tach Checklist for Each Defin					
1		Excavation of Contar				$\boxtimes$	
2		Backfill of Exca	vation				
3				<u> </u>	<u> </u>		
4				<u> </u>			
5 6				+ +			
7				<del>                                     </del>		<del> </del>	
8				+	<del></del>		
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14				<u> </u>	Щ		
15							
DFOW	Phase		LE FEATURE OF WORK COMM Comment/Findin		The same of the second results and the second results and the second results are second results and the second results are second results and the second results are		
No.	Fliase		Comment/Findin	g/Action			
1	Follow-Up	Continue excavation of co	ntaminated soil @ Site 16. JJS	loaded Brinson	Sand & Gravel tr	ucks (how	
	,	many?) with soil from Site	<ol><li>The truck departed the site for</li></ol>	r disposal at WI	M Springhill Landi	fill.	
2	Follow-up						
	<u> </u>						
	1						
					· · · · · · · · · · · · · · · · · · ·		
	My						
			PLING / TESTING PERFORMED	)			
	Sampling/Tes	sting Performed	Sampling/Testing Co	mpany	Site T	echnician	
	N	V/A	N/A			N/A	



	MATERIA	LS INSPECTION	argan himping seri		
Materials received and inspected a N/A	against specifications:				
	SUBMITTALS IN	ISPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	ewed by	Actio	on
N/A	N/A	N/A		N/A	
	OFF-SITE SURVE	EILLANCE ACTIVITIES	7 2 sup 15 sup		
Off-site surveillance activities, inclu N/A	uding action taken:				
		EWORK	a Dalaman		
Rework items identified today which N/A			a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		
Rework items corrected today which N/A	ch were on the rework items list:	::			
	EPOR'	COMMENTS	And Spring Section 25		
@ Site 16. Finished the excavation The truck departed the site for disp	oosal at WM Springhill Landfill.	N AREA INSPECTION		TUCKS WITH SOIL ITO	m sile 16.
Inspection Performed By:	N/A	Signature of	N/A		
Accumulation Area Location:	N/A	Inspector:		<del>-</del>	
No. of Containers:	N/A	No. of Tanks:	T N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta		1	****	
				Yes	No
Are containers and tanks open?	?				Ø
Are there signs of primary contacontainment)?	ainment failure (rust, bulges, f	fluid level drop, sheen	in 2 <sup>nd</sup>		
Are there signs of compromised		oed liner, stained soil)	?		×
Is there any liquid in secondary					$\boxtimes$
If any of these questions were n	narked YES, please commen	ıt:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza		ding"		$\boxtimes$	
Accumulation start date marked	on container(s), tank(s), roll-	-off(s)?			
Contents/waste codes marked of	on container(s), tank(s), roll-o	off(s)?		⊠	



If any of those guestions	were marked NO, please commen	·			
N/A	were marked NO, please commen	<b>.</b> .			
	Soil	Stockpiles			
			Yes		No
Liner secure and intact?					
Cover in place and secur	re (as necessary)?				
If any of these questions	were marked NO, please commen	<b>t:</b>	•	•	
N/A					
	Accum	ulation Area			
			Yes		No
Is the accumulation area	free of severe structural deteriorati	on?			
Is there adequate aisle sp	pace between drums to allow unob	structed movement?	Ø		
If any of these questions	were marked NO, please commen	t:		•	
N/A					
	Emergency Re	esponse Equipment	-		
			Yes	No	NA
Telephone/Radios	Easily accessible in case of e	mergency?			
relephone/rtadios	In working order?				
	Is unused absorbent material	nearby?			
Spill Control	Is personnel protective equipr	nent available?			
	Is a fire extinguisher readily a	ccessible?	⋈		
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	☒		
If any of these questions N/A	were marked NO, please commen	t:			
	Correc	ctive Action			,
Describe actions taken to N/A	correct any deficiency noted abov	e:			
correct, and equipment and during this reporting period	nat this report is complete and I material used, and work performed is in compliance with the contract	Ryan Bitely		05/1	4/02
drawings and specifications except as noted in this repo	s to the best of my knowledge, ort.	Project QC Manager' Signature	9	Da	ite



Date:		5/15/2002	Report No:	220	6			
Project N	ame/Location:	NAS Whiting Field	CTO No	CTO No <b>011</b>		)11		
Project N	0.	151168	Contract No:	Contract No: N62467-98-D-0995				
Task/Acti		Exacavation Of Cor	ntaminated Soil. Backfill of Excav	ation.				
	C Manager:	Ryan Bitely	QC Inspector:	N//	A			
1 排机			BLE FEATURES OF WORK ST					
DFOW		Definable Feature		Preparator		Follow-Up		
No.	(At	tach Checklist for Each Defi						
11		Excavation of Conta						
2		Backfill of Exca	avation			X		
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<u>4</u> 5		. <u> </u>			<del>-  - </del>	<del>  </del>		
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14 15			<del></del>	<del>-  -  -  -  -  -  -  -  -  -  -  -  -  -</del>		<del>                                     </del>		
		DEFINAR	BLE FEATURE OF WORK COM	WENTS				
DFOW	Phase		Comment/Findi					
No.								
	Follow-Up		ontaminated soil and backfill exca			ckfilled,		
		compacted, and finish gra	aded. Centipede sod was used to	cover the excav	ated area.			
	<u> </u>							
	<u> </u>							
	l							
					<u> </u>			
			,		<u></u>			
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	<b>.</b>		<u>.</u>					
5 . F . E. LAPLES			IPLING / TESTING PERFORME	NEW zorodne Staat				
	Sampling/Tee	ting Performed	Sampling/Testing C	allegen conjects of ST 19 West to Committee and	La contraction and the contraction of the contraction	rechnician		
		I/A	N/A	Опрану	Sile			
	<u> </u>	M/A	IWA		-	N/A		



	MATERIAL	SINSPECTION			
Materials received and inspected a N/A	gainst specifications:		tombled- and the second		The Additional Control of the Addition of the
	SUBMITTALS IN	SPECTION/REVIEW			Alais II ja
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	on
N/A	N/A	N/A		N/A	4
					** = 0.000
Off-site surveillance activities, inclu N/A	The second secon	ILLANCE ACTIVITIES			
	· · · · · · · · · · · · · · · · · · ·	WORK	THE COLUMN TO SERVICE THE SERV		
Rework items identified today whic N/A	h were not corrected by close of	business:			
Rework items corrected today which N/A	th were on the rework items list::				
	REPORT	COMMENTS	4100 2 3 3 3		e maria
Excavation of contaminated soil an was used to cover the excavated a		Site 6 was backfilled,	compacted, a	nd finish graded.	Centipede sod
	ACCUMULATION	AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A	•			
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?					
Are there signs of primary conta containment)?	ainment failure (rust, bulges, fl	uid level drop, sheen	in 2 <sup>nd</sup>		
Are there signs of compromised	I secondary containment (ripp	ed liner, stained soil)	?		$\square$
Is there any liquid in secondary	containment?				$\square$
If any of these questions were n N/A	narked YES, please comment	t:			
				Yes	No
Container, tank, roll-off labeled? "Hazardous Waste", "Non-Haza		ling"		×	
Accumulation start date marked					
Contents/waste codes marked of	on container(s) tank(s) roll-of	ff(s)?			
Comorne, waste codes marked c	on container(o), tarm(o), for or	1(0):			



If any of these questions	were marked NO, please comment	::				
N/A						
	Soil	Stockpiles				
			Yes		No	
Liner secure and intact?			Yes			
Cover in place and secur	re (as necessary)?					
· · · · · · · · · · · · · · · · · · ·	were marked NO, please comment					
N/A						
	Accum	ulation Area				
			Yes		No	
Is the accumulation area	free of severe structural deteriorati	on?				
Is there adequate aisle s	pace between drums to allow unob	structed movement?	⊠			
If any of these questions	were marked NO, please commen	:				
N/A						
	Emergency Re	esponse Equipment				
			-	No	NA	
Telephone/Radios	Easily accessible in case of emergency?					
relephone/madios	In working order?					
	Is unused absorbent material nearby?					
Spill Control	Is personnel protective equipment available?		⊠			
	Is a fire extinguisher readily accessible?		⊠			
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	⊠			
If any of these questions N/A	were marked NO, please commen	t:		•	•	
	Correc	ctive Action				
Describe actions taken to N/A	o correct any deficiency noted abov	e:				
correct, and equipment and	hat this report is complete and d material used, and work performed is in compliance with the contract	Ryan Bitely		05/1	5/02	
	s to the best of my knowledge,	Project QC Manager' Signatu	ire	Da	ite	



Doto		E/16/2002	Report No:	227			
Date: Project Na	ame/Location:	5/16/2002 NAS Whiting Field	CTO No	011			
Project No		151168	Contract No:		N62467-98-D-0995		
Task/Activ		Backfill of Excavation.	Contract No.	1402407	-90-D-0999		
	C Manager:	Ryan Bitely	QC Inspector:	N/A	I N/A		
1 TOJOUL W	January II	DEFINAR	LE FEATURES OF WORK STA				
DFOW		Definable Feature		Preparatory	Initial	Follow-Up	
No.	(At	tach Checklist for Each Defina		Tropulation	muai	1 0 0	
1	, , , , , , , , , , , , , , , , , , ,	Backfill of Excav				$\boxtimes$	
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13							
14	<u> </u>			+			
15	<u></u>		***		Ħ		
		DEFINABL	E FEATURE OF WORK COMM	ENTS			
DFOW	Phase	#5.18.00VICO	Comment/Findin				
No.							
	Follow-Up	excavation @Site 6. JJS loa	n @ Site 6 and 16. Installed addi aded one Brinson Sand & Gravel I Springhill Landfill. Started to ba	I trucks with soil fror	n Site 16. The	ea of the e truck departed	
	·						
				<del></del>			
					<del></del> .		
						· · · · ·	
		SAN	PLING / TESTING PERFORME	D. 7			
	Sampling/Te	sting Performed	Sampling/Testing Co	ompany	Site 7	Technician	
		N/A	N/A	·	N/A		
ı			I		I		



	MATERIAL	SINSPECTION			
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS INS	PECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Actio	n
N/A	N/A	N/A	,	N/A	\
	OFF-SITE SURVE	LLANCE ACTIVITIES			
Off-site surveillance activities, inclu N/A	iding action taken:				
	, RE	WORK WAR			
Rework items identified today whic N/A	h were not corrected by close of	business:			The field of the best of the authority controlling
Rework items corrected today which N/A	ch were on the rework items list::				
	REPORT	COMMENTS			
Backfill of excavation @Site 6and Sand & Gravel truck with soil from					led Brinson
		AREA INSPECTION			
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	nks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?			· and		
Are there signs of primary contactontainment)?	ainment failure (rust, bulges, fl	uid level drop, sheen	in 2"		$\boxtimes$
Are there signs of compromised	secondary containment (ripp	ed liner, stained soil)'	?		$\boxtimes$
Is there any liquid in secondary	containment?				$\boxtimes$
If any of these questions were n N/A	narked YES, please comment	:			
				Yes	No
Container, tank, roll-off labeled?			$\boxtimes$		
"Hazardous Waste", "Non-Hazardous Waste", "Analysis Pending"					
Accumulation start date marked	on container(s), tank(s), roll-	οπ(s)?		⊠	
Contents/waste codes marked on container(s), tank(s), roll-off(s)?				$\boxtimes$	



If any of these questions	were marked NO, please comment	i:				
N/A						
	Soil	Stockpiles				
			Yes		No	
Liner secure and intact?						
Cover in place and secu	re (as necessary)?					
If any of these questions	were marked NO, please commen	t				
N/A						
	Accum	ulation Area		• ,		
		- (1.000000-000-000000-00000-00000-00000-0000	Yes		No	
Is the accumulation area	free of severe structural deteriorati	on?	$\boxtimes$			
Is there adequate aisle s	pace between drums to allow unob	structed movement?	⊠			
If any of these questions	were marked NO, please commen	t:		•		
N/A						
	Emergency Re	esponse Equipment				
			Yes	No	NA	
Telephone/Radios	Easily accessible in case of emergency?					
reiephone/radios	In working order?					
	Is unused absorbent material nearby?					
Spill Control	Is personnel protective equipment available?		×			
	Is a fire extinguisher readily a	ccessible?	Ø			
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?				
If any of these questions N/A	were marked NO, please commen	t:		.•	•	
	Correc	ctive Action			• 1	
Describe actions taken to N/A	o correct any deficiency noted abov	e:				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract  Ryan Bitely				05/16/02		
drawings and specifications except as noted in this repo	s to the best of my knowledge, ort.	Project QC Manager' Signature	e	Da	ıte	



Date:		5/17/2002	Report No:	228	3		
Project Na	ame/Location:	NAS Whiting Field	CTO No	01	011		
Project No		151168	Contract No:	N6	2467-98-D-0995		
Task/Activ		Finish Grading		······································			
	C Manager:	Ryan Bitely	QC Inspector:	N/A	1		
			BLE FEATURES OF WORK STA			en alle de la composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition della composition dell	
DFOW		Definable Feature	The second secon	Preparator		Follow-Up	
No.	(At	ttach Checklist for Each Defir	nable Feature of Work)		<u></u>	·	
1		Finish Grad	ling				
2							
3				<del>                                     </del>	Ц		
4						<del>                                     </del>	
5 6				+ +	<del>                                     </del>	+	
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11							
12							
13							
14							
15							
DEOM		DEFINAL	BLE FEATURE OF WORK COMM				
DFOW No.	Phase		Comment/Findin	ig/Action			
NO.	Follow-Up	Finish grading Site 16 Ad	ld fertilizer to Site 6 and 38. Cond	lusted increation	n of all three cites	LIC fortilized the	
	i ollow-op	newly installed sod with tri		iucieu irispeciio	ii Oi all lillee Siles	. JJJ lerunzed trie	
		, and the second	pro ro mini to mine.				
*							
			T 110 110				
						•	
	44	SAN	MPLING / TESTING PERFORME	o (1944-14).			
	Sampling/Tes	sting Performed	Sampling/Testing Co	ompany	Site 2	<b>Fechnician</b>	
	1	N/A	N/A			N/A	
	<del>-</del>						



	MATERIAL	S INSPECTION	fragular.		
Materials received and inspected a N/A	gainst specifications:				
	SUBMITTALS IN	SPECTION / REVIEW			
Submittal No	Spec/Plan Reference	Inspected/Revie	wed by	Acti	on
N/A	N/A	N/A		N//	4
	AEE SITE SUDVE	ILLANCE ACTIVITIES			27.W 33   C. C. C. C. C.
Off-site-surveillance activities, inclu N/A		ICLANCE ACTIVITIES			
	al el RE	WORK			
Rework items identified today which N/A	h were not corrected by close of	business:			
Rework items corrected today whice N/A	ch were on the rework items list:	:			
	REPORT	COMMENTS			
Finish grading Site 16. Fertilized to		The state of the s		P CONTRACTOR OF THE CONTRACTOR	
	ACCUMULATION	I AREA INSPECTION	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		t e f. Ste dan provin
Inspection Performed By:	N/A	Signature of Inspector:	N/A		
Accumulation Area Location:	N/A				
No. of Containers:	N/A	No. of Tanks:	N/A		
No. of Roll-Off Boxes:	N/A	No. of Drums:	N/A		
	Waste Containers, Ta	anks, and Roll-Off Bo	xes		
				Yes	No
Are containers and tanks open?					
Are there signs of primary contacontainment)?	ainment failure (rust, bulges, f	iluid level drop, sheen	in 2 <sup>nd</sup>		
Are there signs of compromised	d secondary containment (ripp	oed liner, stained soil)	?		⊠
Is there any liquid in secondary	containment?				
If any of these questions were r N/A	narked YES, please commen	t:			
				Yes	No
Container, tank, roll-off labeled' "Hazardous Waste", "Non-Haza		dina"		⊠	
Accumulation start date marked				⊠	
Contents/waste codes marked	on container(s), tank(s), roll-o	ff(s)?		⊠	



If any of these questions v	vere marked NO, please comment	:		•		
N/A						
	Soil S	Stockpiles				
			Yes		No	
Liner secure and intact?						
Cover in place and secure	e (as necessary)?					
If any of these questions v	were marked NO, please commen	t:				
N/A						
	Accum	ulation Area				
			Yes		No	
Is the accumulation area f	free of severe structural deteriorati	on?	⊠			
Is there adequate aisle sp	ace between drums to allow unob	structed movement?	⊠			
If any of these questions v	were marked NO, please commen	t:		······································		
N/A						
	Emergency Re	esponse Equipment				
			Yes	No	NA	
Telephone/Radios	Easily accessible in case of emergency?					
Telephone/Hadios	In working order?	In working order?				
	Is unused absorbent material nearby?					
Spill Control	Is personnel protective equipr	nent available?	$\boxtimes$			
	Is a fire extinguisher readily a	ccessible?	☒			
Fire Protection	Is the fire extinguisher fully ch	arged and seal intact?	☒			
If any of these questions \N/A	were marked NO, please commen	t:				
-	Corre	ctive Action				
Describe actions taken to N/A	correct any deficiency noted above	/e:				
On behalf of CCI, I certify that this report is complete and correct, and equipment and material used, and work performed during this reporting period is in compliance with the contract  Ryan Bitely					7/02	
drawings and specifications except as noted in this report	Date					

# Appendix H

**Site Photographs** 

Photographed by: Scott Dunbar Date: 05-09-2002 Time: 1830 Site: 16, Frame: 1, Perspective: Southwest Viewing: Excavation of damp soil from Site 16



### NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-09-2002 Time: 1830
Site: 16, Frame: 2, Perspective: Southwest
Viewing: Excavation stock pile, noting significant debris at Site 16



Photographed by: Scott Dunbar Date: 05-10-2002, Time: 1545 Site: 16, Frame: 3, Perspective: Southwest Viewing: Excavation



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-10-2002, Time: 1545 Site: 16, Frame: 4, Perspective: East Viewing: Excavation area



Photographed by: Scott Dunbar Date: 05-10-2002, Time: 1545 Site: 16, Frame: 5, Perspective: Northwest Viewing: Excavation area.



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-10-2002, Time: 1545 Site: 16, Frame: 6, Perspective: North Viewing: Excavation area



Photographed by: Scott Dunbar Date: 05-10-2002, Time: 1545 Site: 16, Frame: 7, Perspective: West Viewing: Excavation area



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-11-2002, Time: 0945
Site: 16, Frame: 9, Perspective: East
Viewing: Excavation area, showing tree stump being removed



Photographed by: Scott Dunbar Date: 05-11-2002, Time: 0945
Site: 16, Frame: 10, Perspective: Northeast
Viewing: Excavation area, showing tree stump being removed



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-14-2002 Time: 1645 Site: 16, Frame: 20, Perspective: Southwest Viewing: Backfill at Site 16



Photographed by: Scott Dunbar Date: 05-14-2002, Time: 1645 Site: 16, Frame: 21, Perspective: West Southwest Viewing: Backfill at Site 16



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-16-2002 Time: 1525 Site: 16, Perspective: Looking Northeast, Frame: 5A, Viewing: Finished excavation



Photographed by: Scott Dunbar Date: 05-16-2002 Time: 1525 Site: 16, Perspective: Looking Southwest, Frame: 6A, Viewing: Site 16 finished excavation



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1045 Site: 38, Frame: 11, Perspective: North Viewing: Excavation area.



Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1045 Site: 38, Frame: 12, Perspective: Northwest Viewing: Excavation area



### NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1500 Site: 38, Frame: 13, Perspective: Southwest Viewing: Excavation Complete



Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1500 Site: 38, Frame: 14, Perspective: West Viewing: Excavation Complete



### NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1600 Site: 38, Frame: 15, Perspective: Southwest Viewing: Grade Excavation backfill



Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1830 Site: 38, Frame: 16, Perspective: South Viewing: Sod Installed



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-13-2002, Time: 1830 Site: 38, Frame: 17, Perspective: South Viewing: Sod Installed



Photographed by: Scott Dunbar Date: 05-13-2002 Site: 6, Frame: 18, Perspective: South Viewing: Proposed excavation area filled with rainwater



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-15-2002, Time: 1525 Site: 6, Frame: 22, Perspective: Southeast Viewing: Pit barricaded after excavation.



Photographed by: Scott Dunbar Date: 05-15-2002 Time: 1525 Site: 6, Frame: 23, Perspective Down Viewing: Pit completed excavation



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-15-2002 Time: 1525 Site: 6, Frame: 24, Perspective: Looking southeast Viewing: Pit excavation.



Photographed by: Scott Dunbar Date: 05-15-2002, Time: 1525 Site: 6, Frame: 25, Perspective: Down Viewing: Pit completed



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-15-2002, Time: 1600 Site: 6, Perspective: Looking Southwest, Frame: 0A Viewing: Equipment decontamination.



Photographed by: Scott Dunbar Date: 05-15-2002, Time: 1600 Site: 6, Perspective: Looking Southwest, Frame: 1A Viewing: Equipment decontamination.



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-16-2002, Time: 1500 Site: 6, Frame: 2A, Perspective: Looking Southwest, Viewing: Pit finished with sod



Photographed by: Scott Dunbar Date: 05-16-2002, Time: 1500 Site: 6, Frame: 3A, Perspective: Looking Southwest, Viewing: Pit finished with sod



## NAS Whiting Field CTO-0011, N62467-98-D-0995

Photographed by: Scott Dunbar Date: 05-16-2002, Time: 1500 Site: 6, Frame: 4A, Perspective: Looking Southwest, Viewing: Pit finished with sod



# Appendix I

**Transportation and Disposal Log** 

CTO No	Project No	Project Name	Site Description	Container Type	Container Design	Waste Profile Sample No	Contractor	Transporter	Date Transported Start	Date Transported End	Transporter EPA ID	Load ID	Disposal Facility	Disp Fac EPA ID	Media	Waste Type (Haz, Nonhaz, TSCA)	Waste Code Haz Waste No	Disposal Date Start	Disposal Date End	Manifest Number First	Manifest Number Last		The Statement of the Landston			Certif of Disposal	Destruct Date	Comments/ Notes	File Status (see note)
0011	151168	NAS Whiting Field	Sites 6,16,38	Drum	Drum	Staged onsite	CCI							:								<b>t</b>						Awaiting Analytical Results	
0011	151168	NAS Whiting Field	Site 16	Dump Trailer	N/A	011-16-DP- 01-S-2	CCI	Waste Management	5/10/2002	5/10/2002	N/A	245832	Springhitt	1032C58 617	Soil	Non-haz	N/A	5/10/2002	5/10/2002	245832				22	tons				
0011	151168	NAS Whiting Field	Site 16	Dump Trailer	N/A	011-16-DP- 01-S-2	CCI	Waste Management	5/10/2002	5/10/2002	N/A	245833	Springhill	1032C58 617	Soil	Non-haz	N/A	5/10/2002	5/10/2002	245833		-		22	tons				
0011	151168	Field	Site 16	Dump Trailer	N/A	011-16-DP- 01-S-2	CCI	Waste Management	5/10/2002	5/10/2002	N/A	245834	Springhill	1032C58 617	Soil	Non-haz	N/A	5/10/2002	5/10/2002	245834				22	tons				
0011	151168	NAS Whiting Field	Site 16	Dump Trailer	N/A	011-16-DP- 01-\$-2	CCI	Waste Management	5/10/2002	5/11/2002	N/A	245835	Springhill	1032C58 617	Soil	Non-haz	N/A	5/11/2002	5/11/2002	245835				22	tons				
0011	151168	NAS Whiting Pield	Site 38	Dump Trailer	N/A	011-38-DP- 01-S-2	CCI	Waste Management	5/13/2002	5/13/2002	N/A	223268	Springhill	1032C58 617	Soil	Non-haz	N/A	5/13/2002	5/13/2002	223268				22	tons				
0011	151168	NAS Whiting Field	Site 16	Dump Trailer	N/A	011-16-DP- 01-S-2	CCI	Waste Management	5/14/2002	5/14/2002	N/A	223275	Springhill	1032C58 617	Soil	Non-haz	N/A	5/14/2002	5/14/2002	223275				22	tons				
0011	151168	NAS Whiting Field	Site 6	Dump Trailer	N/A	011-6-DP-01- S-5	cci	Waste Management	5/15/2002	5/15/2002	N/A	223274	Springhill	1032C58 617	Soil	Non-haz	N/A	5/15/2002	5/15/2002	223274				22	tons				
0011	151168	NAS Whiting Field	Site 6	Dump Trailer	N/A (	)11-6-DP-01- S-5	CCI	Waste Management	5/15/2002	5/15/2002	N/A	223276	Springhill	1032C58 617	Soil	Non-haz	N/A	5/15/2002	5/15/2002	223276				22	tons				
0011	151168	NAS Whiting Field	Site 6	Dump Trailer	N/A	011-6-DP-01- S-5	OC1	Waste Management	5/15/2002	5/15/2002	N/A	223277	Springhill	1032C58 617	Soil	Non-haz	N/A	5/15/2002	5/16/2002	223277				22	tons				
	151168	NAS Whiting Pield	Site 16	Dump Trailer	N/A	011-16-DP- 01-S-2	CCI	Waste Management	5/16/2002	5/16/2002	N/A	223273	Springhill	1032C58 617	Soil	Non-haz	N/A	5/16/2002	5/16/2002	223273				22	tons				
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#### Appendix J

# Manifests, Certified Way Tickets and Certificates of Disposal

7 June, 2002

Ms. Amy Twitty
Project Manager
CH2MHill Constructors Inc.
1766 Sea Lark Lane
Navarre, FL 32566



RE: Site Remedial Activities, NAS Whiting Field, Sites 6, 16, and 38 Milton, Santa Rosa County, Florida

Dear Ms. Twitty:

Enclosed herewith is the information requested as per Section 4.6.3 of RFP 0011-0540: Excavation at Whiting Field Sites 6, 16, 38. Attached you will find a copy of the certified manifests (Appendix A), waste disposal documentation field notes (Appendix B), and photographs for the work completed (Appendix C) at NAS Whiting Field, Milton, Florida.

After utility clearance was completed, site clearing commenced on Site 16 on 8 May 2002. Soil removal from Site 16 commenced on 10 May 2002. Three truckloads of soil/debris were transported offsite to the Springhill Regional Landfill located in Campbellton, Florida. One trailer was cracked on one truck, boards were broken on another, and several trees were damaged when hit by the backhoe. All trees were sprayed with seal coat (see attached pictures). A new operator was arranged after these incidents. One more truckload of soil/debris was removed from Site 16 on 11 May 2002. After the aforementioned incidents, the first equipment operator was removed from the job.

Work commenced on Site 38 with a new operator on 13 May 2002. One truckload of soil was removed, and both excavations were back filled and sodded that same day.

Due to rainwater accumulation at Site 6, work was continued on Site 16 on 14 May 2002. One more truckload of soil/debris was removed and back filling was started.

Work commenced on Site 6 on 15 May 2002. Three truckloads of soil were removed and one and a half excavations were back filled and sodded that same day.

Site 6 was completed on 16 May 2002 and one last load of soil/debris was Memorial Highway removed from Site 16 for a total of six loads. Back filling continued on Site 16:33615-5000 813-888-6525

Fax: 813-881-1285

All sites were completed and fertilized on 17 May 2002.

A summary of the total volumes of soil removed from each remedial action area is presented in Appendix A. Waste manifest documentation is also presented in Appendix A. Appendix B presents a copy of the field notes compiled by Mr. Josh Wallace (JJSA's Field Superintendent) during commencement of the remedial activities. Site photos are presented I Appendix C.

Upon receipt of analytics from two drums of decontamination water sampled by CH2Mhill, JJSA will assess disposal of said water in accordance with the scope of services.

Should you require additional information or assistance on any issue regarding these documents, please do not hesitate to contact the undersigned by telephone at (813) 888-6525.

Sincerely,

J.J. SOSA & ASSOCIATES, INC.

Fred Portofe, PG Project Manager

**Attachments** 

Josh Wallace

Site Superintendent

h Wallace

#### **APPENDIX A**

#### NAS Whiting Field, Milton, Florida Sites 6,16,38.

Site Number	Manifest Number	Tonnage
Site 6	223277	16.9
Site 6	223274	18.34
Site 6	223276	12.93
	Total	48.17

Site Number	Manifest Number	Tonnage
Site 16	245832	15.66
	245833	18.15
	245834	16.99
	245835	18.2
	223275	11.07
	223273	19.3
	Total	99.37

Site Number	Manifest Number	Tonnage
Site 38	223268	18.21
	Total	18 21



CWM - NHM - 1-5/97

#### **NON-HAZARDOUS MANIFEST**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 2. Page **NON-HAZARDOUS MANIFEST** A. Manifest Number Generator's Name and Mailing Address U.S. NAVY/WHITING FIELD NAS 7151 USS WASP STREET B. State Generator's II MILTON, FL 32570-6159 Generator's Phone Transporter 1 Company Name US EPA ID Number C. State Transporter's ID D. Transporter's Phone BETHEON SOND (850) 875-3439 Transporter 2 Company Name US EPA ID Number E. State Transporter's ID F. Transporter's Phone Designated Facility Name and Site Address G. State Facility's ID US FPA ID Number 10. SPRINGHILL REGIONAL LANDFILL 4945 HIGHWAY 273 H. Facility's Phone CAMPBELLTON, FL 32426 1 0 3 2 0 5 8 6 1 7 850-263-7100 11. Description of Waste Materials 12. Containers 13. Total Quantity Misc. Comments No. Type NON-HAZARDOUS IMPACTED SOIL WM Profile # 00020 WM Profile # WM Profile # WM Profile # K. Disposal Location J. Additional Descriptions for Materials Listed Above Landfill Solidification Cell Level **Bio Remediation** Grid 15. Special Handling Instructions and Additional Information CERTIFICATE OF DISPOSAL IS REQUIRED Purchase Order # **EMERGENCY CONTACT:** GENERATOR'S CERTIFICATION: I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations. Printed/Typed Name Month Day Signature "On behalf of Year 051502 Transporter 1 Acknowledgement of Receipt of Materials 17. Signature Hegh Printed/Typed Name Day Month Year Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Month Day Year 19. Certificate of Final Treatment/Disposal I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above. 20. Facility Owne or Operator: Certification of receipt of non-hazardous materials covered by this manifest. vpe Name Printed/ Month Day Year

#1 - TREATMENT, STORAGE, DISPOSAL FACILITY COPY



1100	ase print or type. (Form designed for use on elite (12-pitch) typewriter.)									
	NON-HAZARDOUS MANIFEST	o. Manifest Document No.	2. Page 1 of 1							
	3. Generator's Name and Mailing Address U.S. NAVY/WHI	TING FIELD NAS	A Manifort Number	000074						
	7151 USS WASP	STREET	WMNA23	43214						
	MILTON, FL 325	570-6159	B. State Generator's ID							
	4. Generator's Phone 850 623-7181	· · · · · · · · · · · · · · · · · · ·								
	5. Transporter 1 Company Name 6.	US EPA ID Number	C. State Transporter's ID  D. Transporter's Phone							
	BRINSON SAND 7. Transporter 2 Company Name 8.	US EPA ID Number	E. State Transporter's ID							
	I I		F. Transporter's Phone							
	Designated Facility Name and Site Address     10.	US EPA ID Number	G. State Facility's ID							
	SPRINGHILL REGIONAL LANDFILL 4945 HIGHWAY 273		H. Facility's Phone							
	CAMPBELLTON, FL 32426   1   6	3 3 2 0 5 8 6 1 7	850-263-	-7100						
	11. Description of Waste Materials	12. Co	ntainers 13. Total Type Quantity	14. I. Unit Wt./Vol. Misc. Comments						
	a. NON-HAZARDOUS IMPACTED SOIL									
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	J. Additional Descriptions for Materials Listed Above		K. Disposal Location							
	LandfillSolidification	-	Cell	Level						
	Bio Remediation			20101						
			Grid							
	15. Special Handling Instructions and Additional Information									
	CERTIFICATE OF DISPOSAL IS REQUIRED									
	Purchase Order # EMERG	ENCY CONTACT:								
	16. GENERATOR'S CERTIFICATION:	ENCY CONTACT:								
	I hereby certify that the above-described materials a applicable state law, have been fully and accurately	are not nazardous wastes a	as defined by 40 CF	R Part 261 or any						
	for transportation according to applicable regulation	r described, classilled and p	packageu, and are i	n proper condition						
	— <del>Printed/</del> Typed Name	Signature "On behalf of"		Month Day Year						
T	17. Transporter 1 Acknowledgement of Receipt of Materials	124TV		051502						
R	Printed/Typed Name	Signature		Month Day Year						
S	Kenny Hontos	Then Hoch	•	1511502						
O R	18. Transporte 2 Acknowledgement of Receipt of Materials									
TRANSPORTER	Printed/Typed Name	Signature		Month Day Year						
-	19. Certificate of Final Treatment/Disposal	*****	3.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4							
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[ ]	I certify, on behalf of the above listed treatment faci was managed in compliance with all applicable laws	ity, that to the best of my k	nowledge, the abov	e-described waste						
F A C I L I T Y			incerises on the date	es listed above.						
<u> </u>	20. Facility Owner or Operator: Certificateion of receipt of non-hazardous mat									
Y	Printed/Typed Name	Signature	le	Month Day Year						



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3. Generator's Name and Mail	ling Address		HITING FIELD	NAS	A. Man	ifest Number	223	276	
		7151 USS WA				Generator's ID	- ten 107 (in 1 107		
4. Generator's Phone	850 623-71	.81							
5. Transporter 1 Company Nar	me	6. I	US EPA ID Num	ber		e Transporter's I			
PRINSON SAND 7. Transporter 2 Company Nar	me		US EPA ID Num	ber		Transporter's I	10.	50) 875-3439	
					F. Tran	sporter's Phone			
9. Designated Facility Name a SPRINGHILL REI 4945 HIGHWAY	GIONAL LANDFI	IL	. US EPA ID Num	ber		e Facility's ID			
CAMPBELLTON,	FL 32426	1	1  0  3  2  0  5  8	6  1  7	H. Faci	lity's Phone <b>850</b> 2	63-7100	ð	
11. Description of Waste Materi	ials	·		12. Cont	ainers Type	13. Total Quantity	14. Unit Wt./Vo	I. Misc. Comments	
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	. <b>v</b>	VM Profile #			lι		<u> </u>		
C.									
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d.			02						
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for transportation	on according to a	oplicable regula	tions.	•	Ĭ	-	•	•	
•	on according to a	,							
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	3. Generator's Name and Mailing Address U.S. Navy/Whiting f	ield NAS		A. Manifo	est Number	245	832
	3. Generator's Name and Mailing Address U.S. Navy/Whiting for 1/51 USS Wasp Str. 1/51 USS Wasp Str. 1/501, FL 32570-6	ret	.	B. State	Generator's ID		
	4. Generator's Phone (850) (23 - 7/8)  5. Transporter 1 Company Name  6.	US EPA ID Number		C. State	Transporter's ID		
	Brinson Sand				porter's Phone		
	7. Transporter 2 Company Name 8.	US EPA ID Number	L		Transporter's ID		
	Designated Facility Name and Site Address     10.	LICERA ID Number	<u>l l </u>		porter's Phone Facility's ID		
	Springhill Regional Landfill	US EPA ID Number		G. State	racinty's 1D		
	9. Designated Facility Narpa and Site Address  Springhill Regional Landfill  4945 Highway 273  Campbellton, FL 32426  1/10	131210151816117			ny's Phone 0-263-7/	90	
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	J. Additional Descriptions for Materials Listed Above		.1	K. Dis	sposal Location		
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	Bio Remediation			Grid			
	15. Special Handling Instructions and Additional Information		•				
	Purchase Order # EMERG	ENCY CONTACT:					
	16. GENERATOR'S CERTIFICATION:						
	I hereby certify that the above-described materials						
	applicable state law, have been fully and accurately for transportation according to applicable regulation	described, classified is.	and pa	аскад	ea, and are	n prop	per condition
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	19. Certificate of Final Treatment/Disposal						
F A C	I certify, on behalf of the above listed treatment faci						
Ĉ-	was managed in compliance with all applicable law	s, regulations, permits	and lic	cense	s on the date	es liste	ed above.
LIT	20. Facility Owner or Operator: Certificateion of receipt of non-hazardous ma	terials covered by this manifest	t.				
Ý	Printed/Typed Name	Signature					Month Day Year
CIA/A	NUM 1 5/07						



	1. Generator's US EPA ID	No.	lanifest							
	NON-HAZARDOUS MANIFEST NON-HAZARDOUS MANIFEST		ument No.	2. Pag of	e 1					
	3. Generator's Name and Mailing Address U.S. Navy / Whiting F 7151 USS Wasp St Milton, FL 32570	ield NAS		A. Mani	fest Number	245	5833			
	Milton, FL 32570	-6159		B. State	Generator's ID					
	<ul> <li>4. Generator's Phone (850) 623 - 7/81</li> <li>5. Transporter 1 Company Name</li> <li>6.</li> </ul>	US EPA ID Number		C. State	Transporter's ID					
	Brinson Sand		1 1 1		sporter's Phone					
	7. Transporter 2 Company Name 8.	US EPA ID Number	<u> </u>	E. State	Transporter's ID					
	9. Designated Facility Name and Site Address	US EPA ID Number		F. Transporter's Phone G. State Facility's ID						
	9. Designated Facility Name and Site Address Springhill Regional Landfill 4945 Highway 273 Campbellton, FL 3242L0	OS EPA ID Number		G. State Facility's ID  H. Facility's Phone						
	Campbellton, FL 32426 111	01312105181611	7		0-263-	7/00				
	11. Description of Waste Materials		12. Conta		13. Total	14. Unit	I. Misc. Comments			
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OR	WM Profile #									
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	J. Additional Descriptions for Materials Listed Above		—- <u>l.</u>	K. Di	sposal Location	<u> </u>				
	LandfillSolidification									
	Bio Remediation			Cell		Le	vel			
				Grid						
	15. Special Handling Instructions and Additional Information						****			
		GENCY CONTACT:								
	16. GENERATOR'S CERTIFICATION:									
	I hereby certify that the above-described materials applicable state law, have been fully and accuratel	are not hazardous w	astes as	defir	ned by 40 CF	R Parl	t 261 or any			
	for transportation according to applicable regulation	ns.	and pe	ackay	eu, anu are n	пріор	er condition			
ł	Printed/Typed Name	Signature "On behalf of"					Month Day Year			
	D. J. MATTHENS	D. Most	**				05/1002			
R	17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name	Simotha								
N S	HOVACE HUBBS	Signature	Boson				Month Day Year しらにしつして			
Ŕ	18. Transporter 2 Acknowledgement of Receipt of Materials		<i>-</i>							
TRANSPORTER	Printed/Typed Name	Signature					Month Day Year			
	19. Certificate of Final Treatment/Disposal									
F	I certify, on behalf of the above listed treatment fac	cility, that to the best	of my kn	owled	lge, the abov	e-desc	cribed waste			
FACIL	was managed in compliance with all applicable law	/s, regulations, permi	ts and li	cense	s on the date	s liste	d above.			
+	20. Facility Owner or Operator: Certificateion of receipt of non-hazardous ma	aterials covered by this manife	est.			~~.				
Ĭ	Printed/Typed Name	Signature	i In				Month Day Year			
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	I .	OUS MANIFEST	1. Generator's US E	1 1 1 1		Manifest Document No.	2. Pag of	e 1			
	3. Generator's Name and	Mailing Address U.S. Nav 7151 US Milton,	y/Whiting	Field 1	VAS	<u> </u>	A. Mani	ifest Numb	oer /	2/5	834
		7151 US	s wasp s	treet			VV	MN		<u> 40</u>	0034
	4. Generator's Phone	nitin 1817 - 860 (038	FL 3257	0-6159		•	B. State	e Generato	or's ID		
	5. Transporter 1 Company			6.	US EPA ID Numi	per	C. State	e Transpoi	rter's ID		
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	7. Transporter 2 Company	Name		8.	US EPA ID Numb	per	E. State	Transpor	ter's ID		
	O Designated Facility Nov	and O's Add						sporter's F			
	9. Designated Facility Nan	il Regional L	and fill	10.	US EPA ID Numb	per	G. State	e Facility's	ID		
	4945	ne and Site Address Il Regional Le					H. Facil	lity's Phon	e		
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	11. Description of Waste Ma	aterials				12. Cont No.	ainers Type	T	13. otal antity	14. Unit Wt./Vol.	I. Misc. Comments
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		W	M Profile #	10.				Шİ			
	d.										
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	J. Additional Description	ons for Materials Listed Abor	/e				K. Di	sposal L	ocation		
	Landfill	Solidification	)								1
	Bio Remediation						Cell			Le	vel
							Grid				
	15. Special Handling I	nstructions and Additional Ir	formation								
	Purchase Order #		F	EMERGENCY	CONTACT:						
	16. GENERATOR'S C	ERTIFICATION:		- INETIGETOT	OCITIAOT.						
	l hereby certi	fy that the above-de	scribed mate	riale ara n	ot hazarda	vie waetee a	e dofir	and by	, 40 CEI	D Dari	261 or onv
	applicable sta	ate law, have been t	ully and accu	ratelv des	cribed. cla	ssified and p	ackad	ied. ar	nd are ir	n Fan Inron	er condition
	for transporta	ation according to ap	plicable regu	ılations.	,			,,			
	Printed/Typed Nan	ne		Sign	nature "On beh	alf of"					Month Day Year
	D.J. MATTH			"	D> Ma	all s					051002
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A N	Printed Typed Nan	\(\lambda_1\)		Sign	ature	different					Month Day Year
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TRANSPORTER	Printed/Typed Nan			Sigr	nature	1 1 100					Month Day Year
П	19. Certificate of Final	Treatment/Disposal						******	w.		
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FACIL	was manage	d in compliance with	all applicable	e laws, rec	ulations.	permits and li	cense	ະອູບ, ເກ	he date	s liste	d above.
		Operator: Certificateion of rec									
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	NON-HAZARDOUS MANIFEST    1. Generator's US EPA ID		Manifest cument No.	2. Page of	e 1			
	3. Generator's Name and Mailing Address us Nary / Whiting Field 715   USS WAS P) Street mi, Iton, FC 32570 - 0	ET NAS		A. Manii	est Num	ber .	24	5835
		6159		B. State	Generat		<u></u>	3030
	4. Generator's Phone (850) 623 - 7181  5. Transporter 1 Company Name 6.	HO FOA ID N		0.01-1-	T	+ 1 ID		
	Brinson Sang	US EPA ID Number	1 1 1		Transpo sporter's			
	7. Transporter 2 Company Name 8.	US EPA ID Number			Transpo			7
	Designated Facility Name and Gite Address     10.	US EPA ID Number			porter's f		****	
	Springhill Regional Condtill							
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	11. Description of Waste Materials		12. Cont No.	ainers Type	7	13. otal antity	14. Unit Wt./Vol	I. Misc. Comments
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	WM Profile #			$\begin{bmatrix} & & & & & & & & & & & & & \end{bmatrix}$		11		
	J. Additional Descriptions for Materials Listed Above		<del>*************************************</del>	K. Dis	sposal L	ocation.		
	LandfillSolidification	_		Cell			Le	evel
	Bio Remediation							
	15. Special Handling Instructions and Additional Information		<del></del>	Grid				
	Purchase Order # EMER	GENCY CONTACT:						
	16. GENERATOR'S CERTIFICATION:							
	I hereby certify that the above-described materials	are not hazardous v	vastes as	s defir	ed by	40 CF	R Par	t 261 or any
	applicable state law, have been fully and accurate for transportation according to applicable regulation	ly described, classific ons.	ed and pa	ackag	ed, aı	nd are i	in prop	er condition
	Printed/Typed Name	Signature "On behalf of"						Month Day Year
	P.J. MOTHERS	DMutter	5					10 5 2002
TRANSPORTER	17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name	Signature		$\overline{}$		-		
N S P	Thomas D Tharp	Signature	o l		1/2			Month Day Year
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Ė	Printed/Typed Name	Signature			0			Month Day Year
	19. Certificate of Final Treatment/Disposal							
F	I certify, on behalf of the above listed treatment fac	cility, that to the best	of my kn	owled	lge, th	ne abov	e-des	cribed waste
A C I	was managed in compliance with all applicable lav			cense	s on t	the date	es liste	ed above.
ĪŢ	<ol> <li>Facility Owner or Operator: Certificateion of receipt of non-hazardous m</li> <li>Printed/Typed Name</li> </ol>	1 6:	est.					
	J Bryan	Jagignature Price	سد				A	Month Day Year
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CWM - NHM - 1- 5/97

# **NON-HAZARDOUS MANIFEST**

se print or type. (Form designed for use on elite (12-pi	11. Generator's US EPA ID No. Man	ifest			
NON-HAZARDOUS MANIFEST	Docum	ent No. 2.	Page 1		
3. Generator's Name and Mailing Address	U.S. NAVY/WHITING FIELD NAS	A. I	Manifest Number	222	272
	7151 USS WASP STREET	'	$WMNA_{\!\scriptscriptstyle \mathrm{D}}$	,223	213
	MILTON, FL 32570-6159	В. 9	State Generator's ID	<del></del>	
4. Generator's Phone	_				
5. Transporter 1 Company Name	6. US EPA ID Number	C. :	State Transporter's ID	)	
BRINSON SOND		D. 1	Transporter's Phone	(85	Ø) 875-343
7. Transporter 2 Company Name	8. US EPA ID Number	E. \$	State Transporter's ID	)	<del> </del>
		F. 1	Transporter's Phone		
9. Designated Facility Name and Site Address	10. US EPA ID Number	G.	State Facility's ID		
SPRINGHILL REGIONAL LANDS 4945 HIGHWAY 273	· 1FF	<u> </u>			
			Facility's Phone		
CAMPBELLTON, FL 32426	1103255861	7	850-26	<u>3-7100</u>	
Description of Waste Materials		12. Container	Total	14. Unit	l.
		No. Ty	pe Quantity	Wt./Vol.	Misc. Commen
. Non-Hazardous impacted soil	-				
	WM Profile #	, , <b>,</b> ,			
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	WM Profile #	4 1 L		,	
J. Additional Descriptions for Materials Listed A	hove	1 K	Disposal Locatio	l l n	
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LandfillSolidificat	ion	Ce	ell	Le	evel
Bio Remediation					
		Gr	id		
<ol><li>Special Handling Instructions and Additional</li></ol>	Information				
ERTIFICATE OF DISPOSAL IS REQUIRED					
Purchase Order #	EMERGENCY CONTACT:				
6. GENERATOR'S CERTIFICATION:					
I hereby certify that the above-	described materials are not hazardous wa	stes as de	efined by 40	CFR Par	t 261 or any
applicable state law, have been	n fully and accurately described, classified	and pack	aged, and a	e in prop	er condition
for transportation according to	applicable regulations.	•	<b>3</b> ,	[]	
Printed/Typed Name	COnst IIO I IIO			1801-1	M
	OR.CEC.USA STIPATURE "On belief of"	ton Do			Month Day Yo
7. Transporter 1 Acknowledgement of Receipt		will			05160
Printed Typed Name	Signature		/	$\rightarrow$	Month Day Ye
KICK Who I bused	1/4n	///			I KT1GC
8. Transporter 2 Acknowledgement of Receipt	of Materials	4/0			LD 1 1 4 C
Printed/Typed Name	Signature				Month Day Ye
	•				
9. Certificate of Final Treatment/Disposal					
Licertify on behalf of the above	listed treatment facility, that to the heat of	my know	dodae the et	ا	oribod wasts
was managed in compliance w	listed treatment facility, that to the best of ith all applicable laws, regulations, permits	IIIY KNOW	neage, the at	ove-des	choed waste
			ises on the d	ales IISTE	u above.
0. Facility Owne or Operator: Certificateion of	receipt of non-hazardous materials covered by this manifest		\ A /	/-/-	/
Printed/Typed Name	\$ignature \( \)	1 10	$\wedge$ $I$	7/1/	Month Day Ye
		$\mathcal{A}^{\mathcal{A}}$		// //U	

#1 - TREATMENT, STORAGE, DISPOSAL FACILITY COPY



CWM - NHM - 1- 5/97

# **NON-HAZARDOUS MANIFEST**

Please	print or type. (Form designed for use on elite (12-pitch) typewriter.)					
	NON-HAZARDOUS MANIFEST	Manifest Document No.	2. Pag			
3.	Generator's Name and Mailing Address  U.S. NAVY/WHITING FIELD	NAS	A. Mani	fest Number 2	23	275
İ	7151 USS WASP STREET MILTON, FL 32570-6159		B. State	Generator's ID	75	
4	Generator's Phone A50 623-7181					
5.	Transporter 1 Company Name 6. US EPA ID N	umber		Transporter's ID		
Ļ	BRINSON SOND Transporter 2 Company Name 8. US EPA ID N			sporter's Phone	(85	0) 875-3439
'	. Transporter 2 Company Name 8. US EPA ID N	umber 		Transporter's ID	<u> </u>	
9.	Designated Facility Name and Site Address 10. US EPA ID N	umber		Facility's ID		
	SPRINGHILL REGIONAL LANDFILL 4945 HIGHWAY 273					
1			H. Facil	ity's Phone		
	CAMPBELLTON, FL 32426   1 0 3 2 C 5	8617	L	850-263-	7100	
1	Description of Waste Materials	12. Cont No.	ainers Type	13. Total Quantity	14. Unit Wt./Vol.	I. Misc. Comments
а	NON-HAZARDOUS IMPACTED SOIL					
G E	WM Profile #	225 Galalı	L .	0 0 D 1 7		
GENER D		265   6   1	<del>p u</del>	A I PILIT	T	
A T O R	WM Profile #	.				
R c.		$\overline{}$	<u> </u>			
	WM Profile #			1 1 2 1		
d.						
	\ \ \ \ \					
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J	I. Additional Descriptions for Materials Listed Above		K. Di	sposal Location		
ı	LandfillSolidification		Cell		Le	evel
	Bio Remediation		Cell		L	5 <b>VG</b> 1
L			Grid			
1	15. Special Handling Instructions and Additional Information					
C	ERTIFICATE OF DISPOSAL IS REQUIRED					
	Purchase Order # EMERGENCY CONTACT	:				
1	6. GENERATOR'S CERTIFICATION:					
1	I hereby certify that the above-described materials are not haza	rdous wastes a	s defii	ned by 40 CF	R Par	t 261 or any
	applicable state law, have been fully and accurately described,	classified and p	ackaç	jed, and are i	n prop	per condition
	for transportation according to applicable regulations.				)	
	Printed/Typed Name Signature "On	behalf of"	Λ	, ) (	/	Month Day Year
_	James 3. Holland	m B	41	1 long		1015/114/012
#   1	7. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature	7	$\gamma$			Month Day Year
N S	JAM C> DICKE Y	ang &	1:	1		IOSI HHG3
T ANSPORT	8. Transporter 2 Acknowledgement of Receipt of Materials		_ ~~			
T E R	Printed/Typed Name Signature			l -		Month Day Year
1	Certificate of Final Treatment/Disposal					**************************************
F	I certify, on behalf of the above listed treatment facility, that to	e best of mv kr	nowled	dge, the abov	e-des	cribed waste
A C	was managed in compliance with all applicable laws, regulations					
	20. FacilityOwner or Operator: Cellificateion of receipt of non hazardous materials covered by	this/manife&	<u> </u>		/	/
۲F	Printe /Typed Name Signature	X X /	KA	X 5/	11/	Month Day Year
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#1 - TREATMENT, STORAGE, DISPOSAL FACILITY COPY



Please print or type. (Form designed for use on elite (12-pitch) typewriter.)												
	NON-HAZARDOUS MANIFEST	1. Generator's US EPA ID No.	Doc	Manifest ument No.	2. Page of	1						
	3. Generator's Name and Mailing Address U.S. NAVY/WHITING FIELD NAS 7151 USS WASP STREET				MMNA <sub>223</sub> 2633268							
	MILTON, FL 32570-6159				B. State Generator's ID							
	i. Generator's Phone <b>850 6,23-7181</b> ii. Transporter 1 Company Name 6. US EPA ID Number				C. State Transporter's ID							
	BRINSON SAND				D. Transporter's Phone (850) 875-3439							
	7. Transporter 2 Company Name 8. US EPA ID Number				E. State Transporter's ID							
						F. Transporter's Phone						
	Designated Facility Name and Site Address 10. US EPA ID Number G. State Facility's ID  SPRINGHILL REGIONAL LANDFILL  4945 HIGHWAY 273											
	CAMPBELLTON, FL 32426   1 0 3 2 C 5 8 6 1 7			H. Facility's Phone 850-263-7100								
	11. Description of Waste Materials 12.			12. Conta	tainers 13. Total Type Quantity			14. Unit Wt./Vol.	I. Misc. Comments			
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GENERATOR	,	VM Profile #	- 1		1	1 1	1 1					
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	d.	M Flome #										
	WM Profile #											
	J. Additional Descriptions for Materials Listed Above				K. Disposal Location							
	LandfillSolidification					Cell Level						
	Bio Remediation				20101							
Gri 15. Special Handling Instructions and Additional Information								Grid				
	ERTIFICATE OF DISPOSAL IS REQUIRED											
Purchase Order # EMERGENCY CONTACT:												
	Purchase Order # EMERGENCY CONTACT:  GENERATOR'S CERTIFICATION:											
	I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR Part 261 or any											
		applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.										
	Printed/Typed Name  D. T. MATTLEWS  Signature "On behalf of O. I. Must				7				1015/1/3/0/2			
Ţ	17. Transporter 1 Acknowledgement of Receipt o	Materials		<del>\</del>	$\overline{}$							
RANSPORT	Printed/Typed Name Signature				Month Day Year							
Sp	18. Transporter 2 Acknowledgement of Receipt of Materials			1an x	2 July 101511307							
R	<ol> <li>Transporter 2 Acknowledgement of Receipt on Printed/Typed Name</li> </ol>	ignature						Month Day Year				
E R	7,											
	19. Certificate of Final Treatment/Disposal											
FACI	I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste was managed in compliance with all applicable laws, regulations, permits and licenses on the dates listed above.											
L	20. Facility Owner or Operator: Certificateion of receipt of non-hazardous materials covered by this manifest.											
Y	Printed/Typed Name								Month Day Year			
	Duryan		L-Dryk	an				سمدين	051302			
#1 - TREATMENT, STORAGE, DISPOSAL FACILITY COPY												

APPENDIX B

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715 Called Heely to get Buch Hot going again mechanic will kon u 130 Hety marke had to Talked to Fredely new 1800 Dut core ed and treas Date 57/0/22 gul executor will be 1850 Offre for hold 30 to 45 minutes Project/Client OC-6/64 CH2MH1 Location Muhimany N'Will's timerrow and more a feel le istroshed mi tiles in note to semone dut, and stock pula is il buckler almost out of you Englituse warmed for 1655 Beet & hain are laying out boundaries against in will back fill hale 64" aveile from getting (850) 839-15.05 Harle to buy dessel Jehn Smith 6 Far oil; (850) 839-7505 THE CREEKE CHOW HILL Comment of the Comment of the

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Project/Client Of 6/2/1///

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Location Letter Letters of Letters of Project Client QZ\_ OIC PU CHO IN ALL

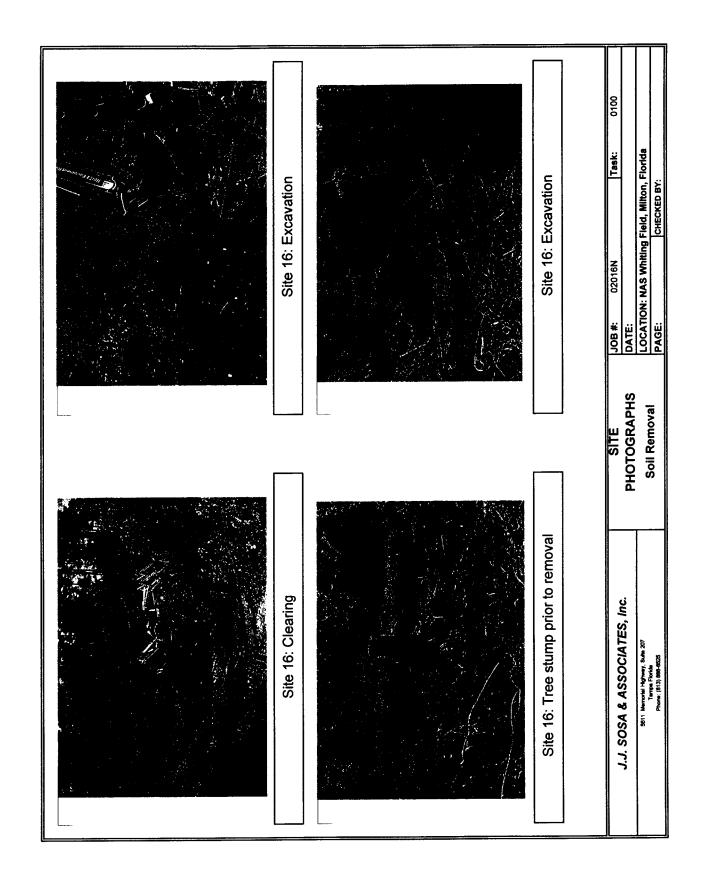
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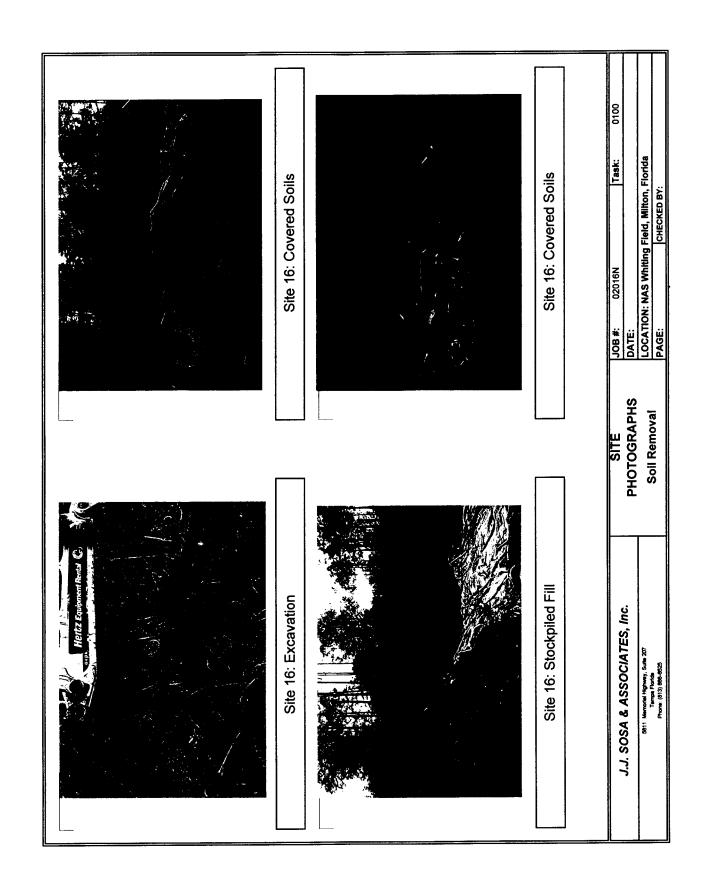
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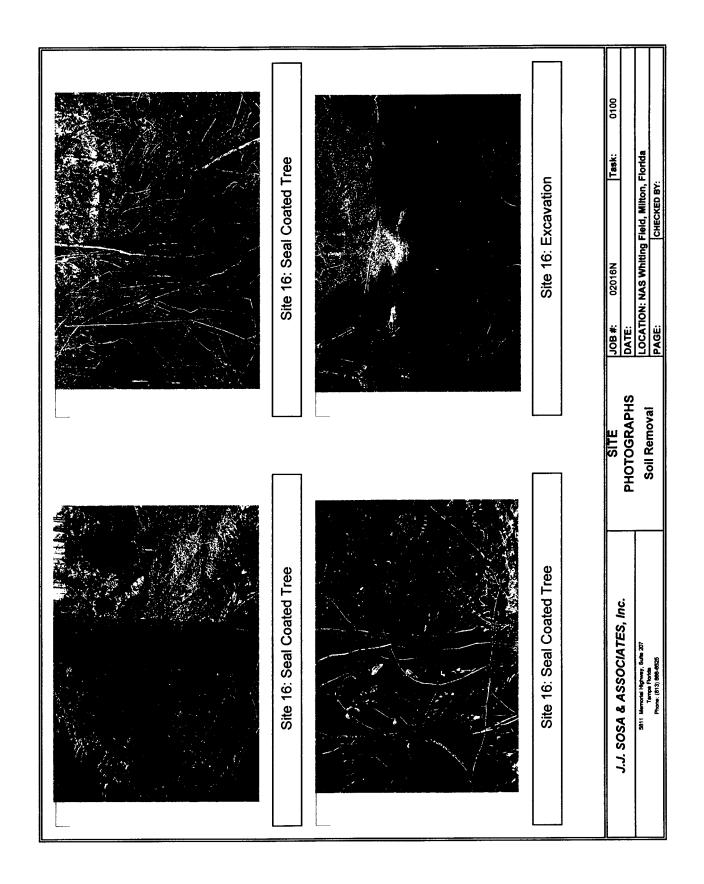
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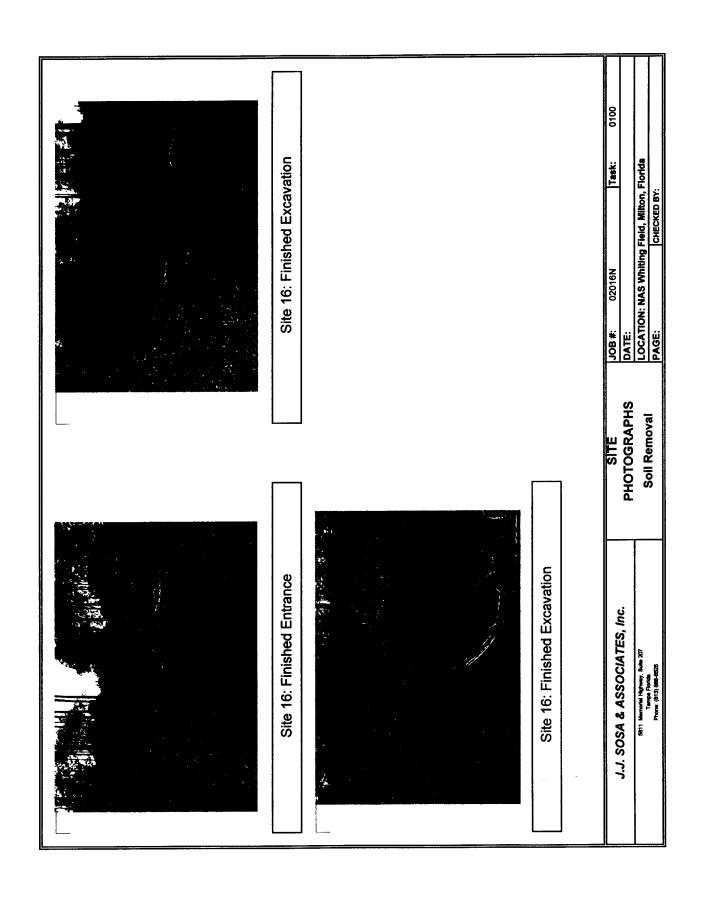
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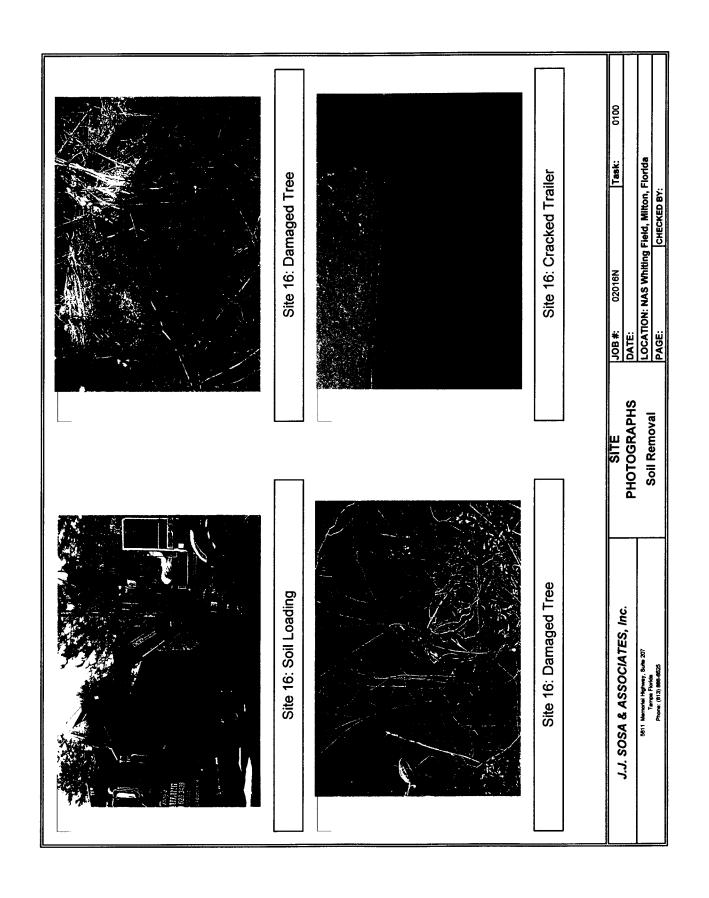
### APPENDIX C

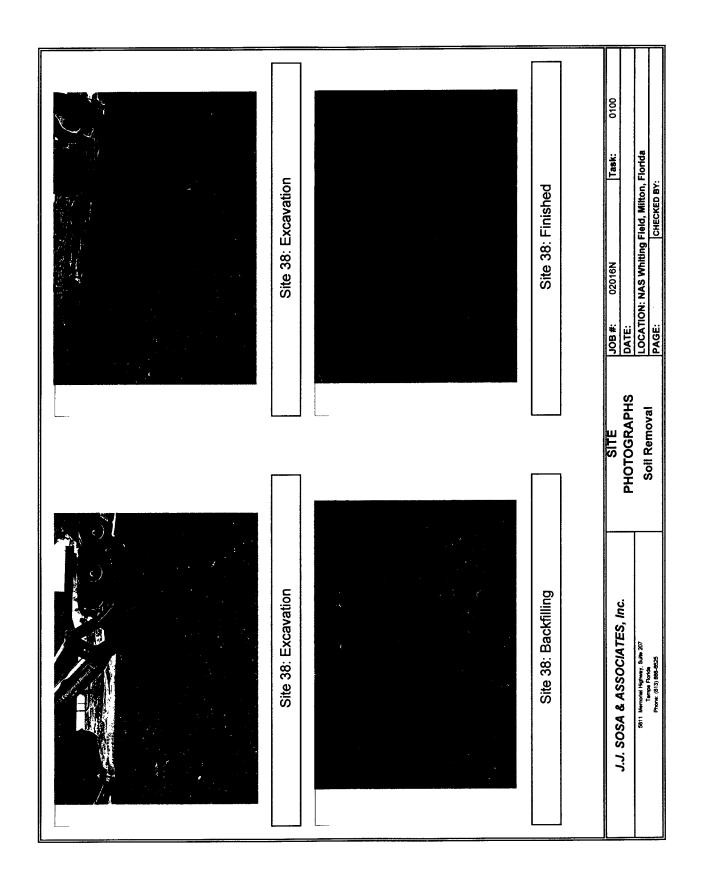












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		Task:	id, Mitton, Florida	CHECKED BY:
		02016N	g H	<u> </u>
1	ı	30B	DATE: LOCATIO	PAGE:
		SITE	PHOTOGRAPHS Soil Removal	
	Site 38: Finished		J.J. SOSA & ASSOCIATES, Inc. 5511 Identical Indiana February, Subt. 201 Impair February	Phone: (813) 666-6625
		•	ال.	_

June 12, 2002

Amy Twitty, P.G. CH2MHill Project Manager/Group Leader 1766 Sea Lark Lane Navarre, Florida 32566

Dear Ms. Twitty;

Attached are the "Certificate of Disposals" you have requested for U.S. Navy; Milton, Florida. Billed to customer: J.J. Sosa & Assoc. Profile Number: CR1235.

If we may be of further assistance, please feel free to contact us.

e / 141

hank Ya

Len Necaise District Manager

Springhill Landfill

Waste Management

4945 Hwy 273

Campbellton, Florida 32426

### Springhill Landfill

ket / Los WSid	<u>User</u>	<u> Hauler</u>	Truck	Customer	Source	Product	<u>Profile</u>	<u>Date</u>	TimeIn 1	<u> imeOut</u>	Gross	<u>Tare</u>	<u>Net</u>	'ards/Units	Cost V	<u>M</u>	E
1Spring Hill La	ndfill																_
308344 1 0	CM	JD	1	JJ	154	131		5/10/2002	1:04:16P	1:37:33P	29.49	13.83	15.66	0.00	\$388.37		G
308366 10	CM	BRINSO	В8	JJ	154	131		5/10/2002	3:02:21P	3:20:26P	30.37	12.22	18.15	0.00	\$450.12		G
308375 10	CM	BRINSO	B10	JJ	154	131		5/10/2002	3:36:29P	3:59:13P	29.55	12.56	16.99	0.00	\$421.35		
308434 1 0	CM	BRINSO	B1	JJ	154	131		5/11/2002	11:24:43A	11:41:42A	31.74	13.54	18.20	0.00	\$451.36		
308480 10	CM	JD	1	JJ	154	TRA		5/13/2002	8:53:10A	8:53:10A	13.97	13.97	0.00	69.00	\$1,324.80	M	
308600 10	CM	ND ND	1	JJ	154	131		5/14/2002	7:12:34A	7:13:09A	32.09	13.97	18.12	0.00	\$449.38		G
308600 2 0	CM	JD	1	]]	154	TRA		5/14/2002	7:12:34A	7:13:09A	13.97	13.97	0.00	18.21	\$349.63		G
308675 10	CM	1D 1D	1	JJ	154	131		5/14/2002		1:54:00P	25.04	13.97	11.07	0.00	\$274.54		
		D מנ	1	IJ	154	TRA		5/14/2002		1:54:00P	13.97	13.97	0.00	11.07	\$212.54		
308675 2 0	CM		I Tr	]] ]]	154	131			11:15:15A		32.43	14.09	18.34	0.00	\$454.83		
308774 1 0	CM	TONYS	T6					5/15/2002			14.09	14.09	0.00	18.34	\$352.13		
308775 10	CM	TONYS	T6	]]	154	TRA						17.30	12.93	0.00	\$320.66		G
308815 10	CM	BRINSO	B8	JJ	154	131		5/15/2002		3:20:15P	30.23						u
308816 10	CM	BRINSO	B8	JJ	154	TRA		5/15/2002	3:21:45P	3:21:45P	12.51	12.51	0.00	12.93	\$248.26		
308836 10	CM	TONYS	T6	JJ	154	131		5/16/2002	6:18:26A	6:19:02A	30.99	14.09	16.90	0.00	\$419.12		G
308836 20	CM	TONYS	T6	JJ	154	TRA		5/16/2002	6:18:26A	6:19:02A	14.09	14.09	0.00	16.90	\$324.48		G
308928 10	CM	BRINSO	07	JJ	154	131		5/16/2002	2:05:46P	2:06:14P	31.80	12.50	19.30	0.00	\$478.64		G
308928 20	CM	BRINSO		IJ	154	TRA		5/16/2002	2:05:46P	2:06:14P	12.50	12.50	0.00	19.30	\$370.56		G

1 Total Tickets 13 Total Loads 17

In Tons :
Out Tons :

165.66 0.00 **Total Product Cost:** 

\$7,290.77

Total In&Out Tons:

165.66

otal Tickets 13 Total Loads 17

In Tons:
Out Tons:

165.66

**Total Product Cost:** 

\$7,290.77

Total In&Out Tons:

165.66

0.00

### Springhill Landfill

ket /Log WSid U	ser Waule	<u>r Truck</u>	Customer	Source	Product	<u>Profile</u>	<u>Date</u>	<u>TimeIn</u>	<u>TimeOut</u>	Gross	<u>Tare</u>	Net 'a	rds/Units	Cost V	<u>M</u>	E
1Spring Hill Landi	ili															
308480 1 0 CI	M JD	1	JJ	154	TRA		5/13/2002	8:53:10A	8:53:10A	13.97	13.97	0.00	69.00	\$1,324.80	M	
308600 2 0 CI	M JD	1	JJ	154	TRA		5/14/2002	7:12:34A	7:13:09A	13.97	13.97	0.00	18.21	\$349.63	(	G
308675 2 0 CI		1	IJ	154	TRA		5/14/2002	1:53:24P	1:54:00P	13.97	13.97	0.00	11.07	\$212.54		
308775 1 0 CI		S T6	IJ	154	TRA		5/15/2002	11:36:38A	11:36:38A	14.09	14.09	0.00	18.34	\$352.13		
308816 1 0 CI			JJ	154	TRA		5/15/2002	3:21:45P	3:21:45P	12.51	12.51	0.00	12.93	\$248.26		
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1 Total Tickets 7 Total Loads 7

In Tons:

0.00 0.00 **Total Product Cost:** 

\$3,182.40

Out Tons:

Total In&Out Tons:

0.00

tal Tickets 7 Total Loads 7

In Tons: Out Tons : 0.00

**Total Product Cost:** 

\$3,182.40

0.00

Total In&Out Tons:

0.00

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Scale Ticket Number: 308926 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill
Waste Management

Len Necaise

Prepared By: Carrie Moss

Lead Scale Operator

**DRIVER: PLEASE SIGN HERE** 

Springhill Landfill 4945 Highway 273

300920

Campbellton, FL 32426 (850) 263-7100

5/16/2002 02:06:14 BRINSON SAND & GRAVEL

GROSS Lbs: 63,600.00 Tare Lbs: 25,000.00

J.J. SOSA & ASSOCIATES

38,600.00 Net Lbs:

J.J. SOSA & ASSOCIATES ATTN: JOSH WALLACE

All Adjustments: 0.00

Adjusted Lbs:

38,600.00

5811 MEMORIAL HIGHWAY SUITE 207 TAMPA FL

JJ

33615

Adjusted Tons:

19.30

HOURS OF OPERATION MON-FRI SAM-4PM

SAT 6AM-12PM

mor SpringhillLandfill Visit Us At:

SANTA ROSA

Destination:

· 홍경 : 기술에 다시 다	0.0000000000000000000000000000000000000	Allena i desal		ARMON A COMMENTARY	protection in the second section of the section of the	
131 \ CONTAMINATED SOIL		19.30	TONS	\$24.80	\$478.64 \$270.55	
- TELLIGIBERTHTION CITY	CS6	12.30	IDITT	\$19.20		_
TOTAL FEES					0.00	
TOTAL TAX					0.00	
TOTAL AMOUNT					0 <del>3. erot -</del>	
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111-023						

Date: June 12, 2002 Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615 Generator: U.S. Navy; Milton, Florida Profile Number: CR1235 Total Tons: 16,90 Scale Ticket Number: 308836 Dates Of Loads: May 2002 Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached. Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction. Certified By: Len Necaise District Manager Springhill Landfill Waste Management Len Necaise Prepared By: Carrie Moss

Lead Scale Operator

#### **DRIVER: PLEASE SIGN HERE**

Springhill Landfill 4945 Highway 273

308836

ORIGINAL

Campbellton, FL 32426 (850) 263-7100

TONYS HAULING & LEASING INC T6 CM 06:18:26 A 06:19:02 5/16/2002

JJ J.J. SOSA & ASSOCIATES

GROSS Lbs: 61,980.00

Tare Lbs:

28,180.00

J.J. SOSA & ASSOCIATES

Net Lbs:

0.00,00

ATTN: JOSH WALLACE

All Adjustments:
Adjusted Lbs:

33,800.00

5811 MEMORIAL HIGHWAY SUITE 207

\_\_\_\_\_

-,----

TAMPA

FL

33615

Adjusted Tons:

16.90

MOURS OF OPERATION MON-FRI 6AM-4PM

SAT 6AM-12PM

Visit Us At: www.SpringhillLandfill.com

SANTA ROSA Destination:

CONTIAMINATED S

	, il forfaschke Fluir selle.					
131 \ CONTAMINATED SOIL	AT .	16.90	TONS	\$24.80	\$419.12	:
THE MEROPINATON CHAR	GES	10.30	UNIT	\$29.E0	4004-48	_
TOTAL FEES TOTAL TAX					0.00 0.00	
TOTAL AMOUNT					<b>4740</b> _60	<u>-</u>
				1111111		

111-023

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Total Tons: 12.93

Scale Ticket Number: 308815 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill Waste Management

ecain

I en Necaice

Prepared By:

Carrie Moss

Lead Scale Operator

Springhill Landfill 4945 Highway 273

300015

ADTAINS

Campbellton, FL 32425 (850) 263-7100

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RRINSON SAND : CRAVEL	RA	CM	01.50.12 D	02:20:15	5/15/2002
	:				
				filitar, lika kalendak	Variation and the second

J.J. SOSA & ASSOCIATES

GROSS Lbs:

60,460.00 34,600.00

J.J. SOSA & ASSOCIATES

ATTN: JOSH WALLACE

All Adjustments:

Tare Lbs:

Net Lbs:

25,860.00

0.00

5811 MEMORIAL HIGHWAY SUITE 207

Adjusted Lbs:

25,860.00

TAMPA

JJ

FL

33615

Adjusted Tons:

12.93

HOURS OF OPERATION

MON-FRI 6AM-4PM **SAT 6AM-12PM** 

SANTA ROSA

Destination:

MANIFEST #223276



CONTAMINATED SOIL

					24-ma - 11-517-75-75
131 \ CONTAMINATED SOIL TOTAL FEES TOTAL TAX		12.93	TONS	\$24.80	\$320.66 0.00 0.00
TOTAL AMOUNT		į			\$320.66
					,
111-023	<del></del>				

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Total Tons: 18.34

Scale Ticket Number: 308774 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill Waste Management

Len Necaise

Prepared By:

Carrie Moss

Least Scale Operator

Springhill Landfill 4945 Highway 273 308774

ORIGINAL

28,180.00

36,680.00

36,680.00

0.00

18.34

Campbellton, FL 32426 (850) 263-7100

TONYS HAULING & LEASING INC T6 CM 11:15:15 A 11:35:21 5/15/2002

JJ J.J. SOSA & ASSOCIATES GROSS Lbs: 64,860.00

33615

J.J. SOSA & ASSOCIATES

ATTN: JOSH WALLACE

5811 MEMORIAL HIGHWAY SUITE 207

TAMPA FL

TAMPA HOURS OF OPERATION

MON-FRI 6AM-4PM

9AT 6AM-12PM

Visit Is Att rose Springhill Landfill co

SANTA ROSA

Destination:

MANIFEST #223274

Tare Lbs:

All Adjustments:

Adjusted Lbs:

Adjusted Tons:

Net Lbs:

CONTAMINATED SOIL

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131 \ CONTAMINATED SOIL		18.34	ENOT	\$24.80	\$454.83
TOTAL FEES	1				0.00
TOTAL TAX	- 1				0.00
	· .				\$454.83
TOTAL AMOUNT					7 30 2 30
111-023					

111-023

TEXAS • TOLL FREE 1-866-713-9

247

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Total Tons:

Scale Ticket Number: 308675 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill

Waste Management

Len Necaise

Prepared By:

Carrie Moss

Lead Scale Operator

**DRIVER: PLEASE SIGN HERE** 

Springhill Landfill 4945 Highway 273

300575

Campbellton, FL 32426 (850) 263-7100

JD TRUCKING

JJ J.J. SOSA & ASSOCIATES GROSS Lbs: 50,080.00

27,940.00 Tare Lbs:

J.J. SOSA & ASSOCIATES

Net Lbs:

22,140.00 0.00

ATTN: JOSH WALLACE

All Adjustments:

5811 MEMORIAL HIGHWAY SUITE 207 FL

Adjusted Lbs:

22,140.00

TAMPA

33615

11.07

HOURS OF OPERATION MON-FRI 6AM-4PM

SAT 6AM-12PM

Adjusted Tons:

SANTA ROSA

Destination:

CONTAMINATED SOIL

<b>#4</b> 4.8.1426.1		<u> </u>		
131 \ CONTAMINATED SOIL	11.07	TONS	\$24.80	\$274.54
TRANSFORTATION CIDIOSES	******	21121	\$10 IEO	\$012.54
TOTAL FEES				0.00
TOTAL TAX				0.00
TOTAL AMOUNT				<del>- 4107.</del> 08
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111,029		<del></del>	<del></del>	

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Total Tons: [8,17

ecano

Scale Ticket Number: 308600 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill Waste Management

Len Necaise

Prepared By:

Carrie Moss
Lead Scale Operator

Springhill Landfill 4945 Highway 273

308500

ORIGINAL

Campbellton, FL 32426 (850) 263-7100

07:12:09 5/14/2002

J.J. SOSA & ASSOCIATES JJ

GROSS Lbs: 64,180.00

Tare Lbs: 27,940.00 36,240.00

J.J. SOSA & ASSOCIATES

Net Lbs: All Adjustments: 0.00

JOSH WALLACE

Adjusted Lbs: 26,240.00

5811 MEMORIAL HIGHWAY SUITE 207 FL

TAMPA

33615 Adjusted Tons: 18.12

HOURS OF OPERATION MON-FRI 6AM-4PM

SAT 5AM-12PM

Visit Us At: www.SpringhillLandfill

SANTA ROSA

Destination:



			Albert Hills		
121 \ CONTAMINATED SOIL		18.12	тоиз	\$24.80	\$449.38
THE TREETIDE ONTETTON CHEROLD		~\$\$ <del>-\$\$</del> -	UNIT	£10.00	\$247.00
TOTAL FEES					0.00
TOTAL TAX					0.00
	1				<del></del>
TOTAL AMOUNT	*				£707_28
	İ				
111-028				· <del></del>	

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Total Tons: 18.20

Scale Ticket Number: 308434 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill Waste Management

Prepared By: Carrie Moss

Lead Scale Operator

Springhill Landfill 4945 Highway 273

308434

OPTGINAL

0.00

18.20

36,400.00

Campbellton, FL 32426 (850) 263-7100

BRINSON SAND E	GRAVEL	В1	СМ	11:24:43 3	11:41:42	5/11/2002
jj j	.J. 303A & AS:	BOCIATES		GR	OSS Lbs:	63,480.00
231403				T	are Lbs:	27,080.00
7 7 SOSA E 35S	OCTATES				Net Lbs:	36,400.00

33615

J.J. SOSA & ASSOCIATES

ATTN: JOSH WALLACE

5011 MEMORIAL HIGHWAY SUITE 207

TAMPA FL

HOURS OF OPERATION

MON-FRI 6AM-4PM

SAT 6AM-12PM

Wigit Us Att. once SpringhillLandfill co

SANTA ROSA

Destination:

MANIFEST #245835

All Adjustments:

Adjusted Lbs:

Adjusted Tons:

CONTAMINATED SOIL

231403

231403

TOTAL AMOUNT

TOTAL FEES

131 \ CONTAMINATED SOIL

18.20 TONS \$24.80 \$451.36 0.00 0.00 \$451.36

111-028

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Scale Ticket Number: 30837 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District Manager

Springhill Landfill Waste Management

Len Necais

Prepared By: Carrie Moss

Lead Scale Operator

Springhill Landfill 4945 Highway 273

308375

ORIGINAL

Campbellton, FL 32426 (850) 263-7100

BRINSON SAND & GRAVEL 5/10/2002

JJ J.J. SOSA & ASSOCIATES GROSS Lbs:

59,100.00 25,120.00

Tare Lbs: J.J. SOSA & ASSOCIATES

33615

Net Lbs: 33,980.00

ATTN: JOSH WALLACE

All Adjustments: 0.00

5811 MEMORIAL HIGHWAY SUITE 207

33,980.00

TAMPA

Adjusted Lbs:

Adjusted Tons:

15.99

HOURS OF OPERATION MON-FRI 6AM-4PM

SAT SAM-12PM

Vivit Us At: www.SpringhillLandfill.com

FL

SANTA ROSA

Destination:

X開發 병원 발전하다 하는 것 같아 그는 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은	电极环间隔点 计二字单元 电流电流 海滨 隐囊的	The second second	AND THE REAL PROPERTY OF THE SERVER	
131 \ CONTAMINATED SOIL	16.99	TONS	\$24.80	\$421.35
TOTAL FEES				0.00
TOTAL TAX				0.00
TOTAL AMOUNT				\$421.35
111-023				
··· <del>·</del>				

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace
Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615
Generator: U.S. Navy; Milton, Florida Profile Number: CR1235
Total Tons:
Scale Ticket Number: 308366 Dates Of Loads: May 2002
Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.
Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.
Certified By:
Len Necaise
District Manager
Springhill Landfill
Waste Management
Le secare
Len Necaise

Prepared By: Carrie Moss

Lead Scale Operator

**DRIVER: PLEASE SIGN HERE** 

Springhill Landfill 4945 Highway 273

308355

OPTETNAL

Campbellton, FL 32426 (850) 263-7100

BRINSON SAND & GRAVEL B8 CM 03:02:21 P 03:20:26 5/10/2002

JJ J.J. SOSA & ASSOCIATES

GROSS Lbs: 60,740.00

24,440.00

J.J. SOSA & ASSOCIATES

Net Lbs:

Tare Lbs:

36,300.00

ATTN: JOSH WALLACE

All Adjustments:

0.00

5811 MEMORIAL HIGHWAY SUITE 207

Adjusted Lbs:

36,300.00

TAMPA

33615

Adjusted Tons:

18.15

HOURS OF OPERATION

MON-FRI 6AM-4PM

**SAT: 6AM-12 PM** 

Winit No At: year Springhill and fill gos

SANTA ROSA

Destination:

CONTAMINATED SOIL

	. Kanatarya sec				
131 \ CONTAMINATED SOIL	1	18.15	TONS	\$24.80	\$450.12
TOTAL FEES					0.00
TOTAL TAX					0.00
TOTAL AMOUNT					\$450.12
111,029			<u> </u>	1	

Date: June 12, 2002

Company (Customer Billed): J.J. Sosa & Assoc. Contact: Josh Wallace

Address: 5811 Memorial Hwy Suite 207; Tampa, Florida 33615

Generator: U.S. Navy; Milton, Florida Profile Number: CR1235

Total Tons: \_\_\_\_15.66

Scale Ticket Number: 308344 Dates Of Loads: May 2002

Springhill Landfill, Waste Management, 4945 Hwy 273; Campbellton, Florida 32426; hereby declares the above profiled material has been disposed of at Springhill Landfill on the dates listed above. Summary of material is attached.

Thank you for using Springhill Landfill. We sincerely appreciate your business. We hope your experience with us has been to your satisfaction.

Certified By:

Len Necaise

District, Manager

Springhill Landfill Waste Management

Len Necaise

Prepared By:

Carrie Moss

Lead Scale Operator

Springhill Landfill 4945 Highway 273

308344

15.66

Campbellton, FL 32426 (850) 263-7100

		* * * * * * * * * * * * * * * * * * *				ORIGINAL
JD TRUCKING		1	СМ	01:04:16 P	01:37:33	5/10/2002
JJ J.J. SOSA & ASSOCIATES			GRO Ta	58,980.00 27,660.00		
J.J. 505A & A550	CIATES				Net Lbs:	31,320.00
ATTN: JOSH WALLACE			All Adju	0.00		
5811 MEMORIAL HI	SHWAY SUITE 201	7		Adjust	ed Lbs:	31,320.00
TAMPA	FL	33615		Adiuste	ed Tons:	15.66

HOURS OF OPERATION MON-FRI 6AM-4PM SAT 6AM-12PM

Visit Us At: www.SpringhillEandfill.co

SANTA ROSA

Destination:

MANIFEST 245832

Adjusted Tons:

CONTAMINATED SOIL

Markey Committee of the			<u>. I.</u>		
131 \ CONTAMINATED SOIL	;	15.66	TONS	\$24.80	\$388.37
TOTAL FEES					0.00
TOTAL TAX					0.00
TOTAL AMOUNT			!		\$388.37
					·
			•	]	
				i	
111-023				L	